

EPA

Water

Definitions/

Water Quality Standards Criteria Summaries: A Compilation of State/Federal Criteria

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The reader should consult the water quality standards of a particular State for exact regulatory language applicable to that State. Copies of State water quality standards may be obtained from the State's Water Pollution Control Agency or its equivalent.

Additional information may also be obtained from the:

Standards Branch
Criteria and Standards Division (WH-585)
Office of Water Regulations and Standards
U.S. Environmental Protection Agency
Washington, D.C. 20460
202-475-7315

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INTRODUCTION

This digest is compiled to provide general information to the public as well as to Federal, State, and local officials. It contains excerpts from the individual Federal-State water quality standards establishing pollutant specific criteria for interstate surface waters. The water quality standards program is implemented by the U. S. Environmental Protection Agency where responsibility for providing water quality recommendations, approving State-adopted standards for interstate waters, evaluation adherence to the standards, and overseeing enforcement of standards compliance, has been mandated by Congress.

Standards, a nationwide strategy for surface water quality management, contain three major elements: the use (recreation, drinking water, fish and wildlife propagation, industrial, or agricultural) to be made of the navigable water; criteria to protect these uses; and an antidegradation statement to protect existing high quality waters, from degradation by the addition of pollutants.

Water quality criteria (numerical or narrative specifications) for physical, chemical, temperature, and biological constituents are stated in the July 1976 U. S. Environmental Protection Agency publication Quality Criteria for Water (QCW), available from the Government Printing Office, Washington, D.C. The 1976 QCW, commonly referred to as the "Red Book," is the most current compilation of scientific information used by the Agency as a basis for assessing water quality. This publication is subject to periodic updating and revisions in light of new scientific and technical information.

This digest is a compilation of key terms and definitions which are employed by a given state in implementing its Water Quality Standards program. The understanding of these terms and definitions has become increasingly important as more public and local government interests focus on the attainability of goals outlined by Clean Water Act. Increased importance is also given to these terms as more interstate program coordination is accomplished.

Since water quality standards experience revisions and upgrading from time to time, following procedures set forth in the Clean Water Act, individual entries in this digest may be superseded. As these revisions are accomplished and allowing for the States to revise their standards accordingly, this digest will be updated and reissued. Because this publication is not intended for use other than as a general information resource, to obtain the latest information and for special purposes and applications, the reader needs to refer to the current approved water quality standards. These can be obtained from the State water pollution control agencies or the EPA or Regional Offices.

Individual State-adopted definitions follow:

REFERENCES

- 5 California Water Quality Standards by River Basins, ca. 1975

For more detailed information on selected basins, sub-basins and stretches of streams and coastal areas refer to California State Water Quality Standards.

- 8 Delaware Water Quality Standards for Streams, 1985.

- 9 Florida Administrative Code, Chapter 17-4, 1987 and Florida Administrative Code, Chapter 17-3, 1988.

- 11 Hawaii Administrative Rules, Title II, Hawaii Department of Health, Chapter 54: Water Quality Standards, 1988.

- 12 Idaho Department of Health and Welfare Rules and Regulations, Title 1, Chapter 2, "Water Quality Standards and Wastewater Treatment Requirements", 1980.

- 18 Louisiana Water Quality Standards, Louisiana Department of Environmental Quality: Office of Water Resources, 1984

- 20 Water Quality and Water Pollution Control, Subtitle 50, Chapter 1, Maryland Department of Health and Mental Hygiene.

- 25 Missouri Water Quality Standards, ca. February, 1978

- 27 Nebraska Water Quality Standards, Title 117, Chapter 1, Nebraska Department of Environmental Control.

- 31 Water Quality Standards for Interstate and Intrastate Streams in New Mexico, State of New Mexico Water Quality Control Commission, 1988.

- 35 Ohio Water Quality Standards, Chapter 3745-1 of the Administrative Code, Ohio Environmental Protection Agency, 1985.

- 38 Pennsylvania Water Quality Standards, Department of Environmental Resources, Title 25. Part 1. Subpart C. Article II. Chapter 93 of Pennsylvania Code.

- 40 South Carolina Water Classifications and Standards, Regulation 61-68, Office of Environmental Quality Control, South Carolina Department of Health and Environmental Control, 1985.

- 42 Tennessee's Water Quality Criteria and Stream Use Classifications for Interstate and Intrastate Streams, Tennessee Water Quality Control Board: Department of Health and Environment, 1987.

- 43 Texas Surface Water Quality Standards, Texas Water Commission, Rule Change, 1988.

- 44 Utah Standards of Quality for Waters of the State, Wastewater Disposal Regulations: Part II, State of Utah Department of Health: Division of Environmental Health, 1988.
- 45 Vermont Water Quality Standards, State of Vermont Water Resource Board, 1987.
- 48 Water Quality Standards, West Virginia Legislative Rules, State Water Resources Board, 1985.
- 51 American Samoa Water Quality Standards, Revised July, 1973
- 53 Territory of Guam Water Quality Standards, Sept. 1975
- 55 Puerto Rico Water Quality Standards Regulation, Environmental Quality Board, 1983.
- 56 Trust Territory of the Pacific Islands Water Quality Standards, October 21, 1973
- 57 Virgin Islands Water Quality Standards, Aug. 1973

ENVIRONMENT REPORTER, The Bureau of National Affairs, Inc.
Washington, D.C. 20037

- 1 Pages 701:0501-0509, February 16, 1979
- 2 Pages 706:1004-1008, July 20, 1979
- 3 Pages 711:0542-0544, August 5, 1977
- 4 Pages 716:0603, March 26, 1976
- 6 Pages 726:1005-,1011-1013, March 7, 1980
- 7 Pages 731:1002-1009, September 8, 1978
- 12 Pages 765:0512-0515, January 30, 1976
- 13 Page 766:0504-0509, October 5, 1979
- 14 Pages 771:0502-0504, September 29, 1978
- 15 Pages 776:0504-0506, April 10, 1979
- 16 Pages 781:0501-0502, May 18, 1979
- 17 Pages 786:0501-0502, August 29, 1975
- 19 Pages 796:0103-0108, February 16, 1979

21 Page 806:1003, March 30, 1979
22 Page 811:1043, 1974
23 Pages 816:0602-0607, 0642-0648, 1974
24 Pages 821:0502-0505, June 30, 1978
26 Pages 831:0501-0510, February 21, 1975
28 Pages 841:0507-0537, December 7, 1979
29 Pages 846:0501-0508, November 17, 1978
30 Pages 851:1001-1023, December 15, 1978
32 Pages 861:1002-1007, August 11, 1979
33 Pages 866:1004-1009, December 28, 1979
34 Pages 871:0501-0506, November 25, 1977
36 Pages 881:1001-1007, September 21, 1979
37 Pages 886:0513-0524, August 29, 1975
39 Pages 901:0501-0505, November 3, 1978
41 Pages 911:0501-0507, June 22, 1979
46 Pages 936:1001-1003, June 27, 1975
47 Pages 941:1001-1005, May 26, 1978
49 Pages 951:;1002-1003, April 28, 1978
50 Pages 956:1001-1007, January 11, 1980
52 Page 741:1002, November 23, 1979

State
Alabama¹

DEFINITIONS

a. State Waters means all waters of any river, stream, watercourse, pond, lake, coastal, ground or surface water, wholly or partially within the state.

b. Sewage means water-carried human wastes from residences, building, industrial establishments or other places including, but not limited to, any vessels, or other conveyances traveling or using the waters of this state, together with such ground, surface, storm or other waters as may be present.

c. Industrial Wastes means liquid or other wastes resulting from any process of industry, manufacture, trade or business or from the development of natural resources.

d. Other Wastes means all other substances, whether liquid, gaseous or solid, from all other sources including, but not limited to, any vessels, or other conveyances traveling or using the waters of this state, except industrial wastes or sewage, which may cause pollution of any waters of the state.

e. Commission means the Water Improvement Commission; and "member" means a member of said Commission.

Alaska²

(1) "acute" means severe but of short duration with respect to constituent toxicity of disease;

(2) "anadromous fish" means those fish which spend a portion of their lives in both fresh and salt waters, including the five species of Pacific salmon, Dolly Varden, rainbow trout (steelhead), sea-run cut throat trout, arctic char, sheefish and whitefish;

(3) "aquaculture" means the regulation and cultivation of water plants or animals for human use or consumption;

(4) "boundary" means any line or landmark which serves to clarify, outline, or mark a limit, border, or interface;

(5) "central office" means the central office of the Alaska Department of Environmental Conservation, Pouch 0, Juneau, Alaska 99811.

(6) "Clean Water Act" means the Federal Water Pollution Control Act (commonly referred to as the Clean Water Act (P.L.92-500, as amended by P.L. 95-217) 33 U.S.C. Sec. 1251 et seq.);

(7) "chronic" means lasting a long time or recurring often with respect to constituent toxicity or disease;

(8) "color" means that condition of water which results in the visual sensations of hue and intensity; apparent color is the condition of water due to both substances in solution and due to suspended matter; color is measured in water after the turbidity is removed;

(9) "commissioner" means the commissioner of environmental conservation;

(10) "compensation point for photosynthetic activity" means that point at which incident light penetration is sufficient for plankton to photosynthetically produce enough oxygen to balance their respiration requirements;

(11) "contact recreation" means activities in which there is direct and intimate contact with water; examples of primary contact recreation include wading and dabbling, swimming, diving, water skiing, surfing and any intimate contact with water directly associated with shore-line activities;

(12) "criterion" means a designated concentration or limit of a constituent that, when not exceeded, will protect an organism, an organism community, or a prescribed water use or quality with a reasonable degree of safety; a criterion, in some cases, may be a narrative statement instead of a numerical constituent concentration or limit;

(13) "department" means the Alaska Department of Environmental Conservation;

(14) "dissolved oxygen" means the solubility of oxygen in water as determined either by the Winkler (iodometric) method and its modifications or by the Membrane Electrode Method;

(15) "effluent" means that segment of a wastewater stream immediately following the final step in any treatment process but before the wastewater stream is discharged to the receiving environment;

(16) "fecal coliform bacteria" means those bacteria that can ferment lactose at 44.5 degree plus or minus 0.2 degree C to produce gas in a multiple tube procedure; fecal coliform bacteria also means all organisms which produce blue colonies within 24 plus or minus hours of incubation at 44.5 degree plus or minus 0.2 degree C in an M-FC broth medium;

(17) "fish" means any of the group of cold-blooded vertebrate animals living in water, and having permanent gills for breathing and fins for locomotion;

(18) "Grain Size Accumulation Graph" means the graph of the sediment sieving results where the logarithm of the size (millimeters) is plotted on the horizontal axis and percent accumulation by weight is plotted in the linear scale on a vertical axis;

(19) "groundwater" means water is in the zone of saturation, which is the zone below the water table, in which all interstices are filled with water;

(20) "industrial use" means any water supply used in association with a manufacturing or production enterprise (other than food processing) including mining, placer mining, energy production or development;

(21) "lake" means an inland body of water, fresh or salt, of substantial size, occupying a basin or hollow in the earth's surface, which may or may not have a current or single direction of flow;

(22) "LC₅₀" means the median lethal concentration of a toxicant; it is the concentration which is lethal to fifty percent of the organisms tested under conditions outlined by the department in a specified time; "LC₅₀" means the same as tolerance limit TLM, or TL₅₀;

(23) "mean" means the average of values obtained over a specified period of time; for fecal coliform determination the mean shall be computed as the logarithmic mean;

(24) "micrograms per liter" (ug/l) means the concentration at which 1 millionth of a gram (10^{-6} -g) is contained in a volume of 1 liter; there are 453.59 grams in a pound;

(25) "milligram per liter" (mg/l) means the concentration at which 1 milligram (10^{-3} -g) is contained in a volume of 1 liter; it is approximately equivalent to the unit parts per million (ppm), formerly of common use;

(26) "mixing zone" means the area contiguous to a discharge or to an activity in the water, where a receiving water may not meet all the water quality standards; wastes and water are given an area to mix such that the water quality standards are met at the boundaries of the mixing zone;

(27) "most probable number" (MPN) means the statistically determined number which represents the number of individuals most likely present in a given sample or aliquot, based on test data.

(28) "natural condition" means those conditions, physical, chemical, biological, or radiological which exist(ed) in a water before any man induced discharge into the water or any activity of man resulting in addition of material into the water;

(29) "oil and grease" means oil and grease as defined by the procedure used; see sec. 20(c) of this chapter for analytical procedures;

(30) "pH" means the negative logarithm of the hydrogen-ion activity concentration when expressed as moles per liter; $\text{pH} = -\log_{10} (\text{H}^+)$;

(31) "pollution" means the contamination or altering of waters, land or subsurface land of the state in a manner which creates a nuisance or makes waters, land or subsurface land unclean, or noxious, or impure, or unfit so that they are actually or potentially harmful or detrimental or injurious to public health, safety or welfare, to domestic, commercial, industrial, or recreational use, or to livestock, wild animals, birds, fish or other aquatic life;

(32) "residues" means floating solids, debris, sludge deposits, foam, scum or any other materials or substances remaining in a water body as a result of a direct or proximate activity of man;

(33) "secondary recreation" means recreation activities in which water use is incidental, accidental or sensory, and includes fishing, boating, camping, hunting, hiking and vacationing;

(34) "sediment" means solid material of organic or mineral origin that is transported by, suspended in, or deposited from water; it includes chemical and biochemical precipitates and organic material such as humus;

(35) "sheen" means an iridescent appearance on the surface of the water;

(36) "sodium absorption rate" (SAR) means the estimate of the degree to which sodium will be absorbed in soil from a given water as proposed by the U. S. Salinity Laboratory, U. S. Department of Agriculture, Handbook

60, expressed as the quotient of the sodium ion concentration and the square root of one-half the sum of the calcium and magnesium ion concentrations;

(37) "spawning" means the process of producing, emitting or depositing eggs, sperm, seed, germ, larvae, young or juveniles, especially in large numbers by aquatic life, including fish, shellfish, amphibians, mollusks and crustaceans;

(38) "thermocline" means the layer of water between a warmer, surface zone and a colder, deep-water zone in a thermally stratified body of water, in which the water temperature decreases rapidly with depth;

(39) "total aromatic hydrocarbon" (TAH) means those water accommodated compounds having at least one aromatic ring and includes the following functional groups: oxyaromatics, heterocyclic compounds, benzene family mononuclear aromatics, and polynuclear aromatic hydrocarbons;

(40) "total hydrocarbons" (TH) means those compounds measured using Gruenfields IR partition infrared methods as specified in the 14th Edition of Standards Methods for Examination of Wastewater (method 502 B); samples collected in marine waters for TH analysis shall be taken within one meter of the surface and below any observable surface slip sheen or fresh water lens; sample collected in fresh waters shall be taken immediately below the surface of the water and below any observable surface slip sheen;

(41) "toxic substances" means those materials, or combinations of materials, including disease-causing agents which after discharge and upon exposure, ingestion, inhalation or assimilation into any organism, either directly from the environment or indirectly by ingestion through food chains, will, on the basis of information available, cause death, disease, behavioral abnormalities, malignancy, genetic mutation, physiological abnormalities (including malfunctions in reproduction) or physical deformations, in affected organisms or their offspring; the term includes the following substances, and any other substance identified as a toxic pollutant under sec. 307 (a) of the Clean Water Act of 1977 (33 U.S.C. sec. 466 et seq.);

Aldrin/Dieldrin; Arsenic; Benzidine; Carbon tetrachloride; Cadmium; Dichlorobenzidine; Chlorinated ethanes; Chloroform; Chromium; Demeton; Dichloroethylenes; Dinitrotoluene; Fluoranthene; Diphenylhydrazine; Endrin; Hexachlorocyclo-

pentadiene; Ethylbenzene; Lindane; Mercury, Nickel, Nitrobenzene; Napthalene, Silver, Vinyl Chloride; Acenaphthene; Antimony, Chlorinated benzenes; Chloroalkylethers; DDT; Dichloropropane and Dichloropropene; Halomethanes; Malathion; Tetrachloroethylene; Trichloroethylene; Polynuclear aromatic hydrocarbons, Endosulfan; Mirex, Pentachlorophenol, Phenol; Acrylonitrile; Asbestos; Benzene, Beryllium; Chlorinated Napthalene; 2-Chlorophenol; Chlorophenols; Chlorophenoxy herbicides; Byanide; 2, 4-Dichloraphenol, Acrolein, Cloradane, Nitrosamines; Copper; dichlorobenzenes; Guthion; Haloethers; Heptachlor; Hexachlorobutadiene; Hexachlorocyclohexane; Isophorone; Lead; Methoxychlor; nitrophenols; Parathion; Phtalate Esters; PCB's; Selenium, P-Dioxin; Thallium; Toluene; Toxaphene, Zinc, 2,4-dimethylphenol;

(42) "turbidity" means an expression of the optical property that causes light to be scattered and absorbed rather than transmitted in straight lines through a water sample' turbidity in water is caused by the presence of suspended matter such as clay, silt, finely divided organic and inorganic matter; plankton, and other microscopic organisms;

(43) "waters" means lakes, bays, sounds, ponds, impounding reservoirs, springs, wells, rivers, streams, creeks, estuaries, marshes, inlet, straits, passages, canals, the Pacific Ocean, Gulf of Alaska, Bering Sea and Arctic Ocean in the territorial limits of the state, and all other bodies of surface or underground water, natural or artificial, public or private, inland or coastal, fresh or salt, which are wholly or partially in or bordering upon the state or under jurisdiction of the state; "waters" does not include ponds, lagoons or parts of wastewater treatment systems which are lined or constructed in such a manner that seepage into the ground is not allowed;

(44) "water recreation" means contact recreation and/or secondary recreation as defined in this section;

(45) "water supply" means any of the waters of the state which are designated to be protected for fresh water or marine water uses including waters used for drinking, culinary, food processing, agricultural, aquacultural, seafood processing, and industrial purposes;

(46) "wildlife" means all species of mammals, birds, reptiles and amphibians..

1. "Act" means the Clean Water Act as amended, 33 USC 1251 et seq., which is hereby adopted and incorporated by reference and is on file with the Department of Environmental Quality and the Office of the Secretary of State.
2. "Annual Mean" is the arithmetic mean of values for any consecutive twelve (12) month period, provided that such values are determined for at least three (3) months and that each monthly value is the arithmetic mean when more than two observations are determined in that month.
3. "Cold water fishery" means waters having an environment suitable for the propagation and habitation of salmonids.
4. "Council" means the Arizona Water Quality Control Council.
5. "Department" means the Department of Environmental Quality.
6. "Director" means the Director of the Department of Environmental Quality or his designated representative.
7. "Effluent dominated water" means a surface water segment which consists primarily of discharges of treated wastewater and which has been classified as effluent dominated water by the Council, pursuant to the criteria listed in section R18-11-304.
8. "Mixing zone" associated with a particular point-source discharge means that volume of a surface water body contiguous to the point of discharge in which the Council:
 - a. has determined that the requirements given in R18-11-212 have been satisfied; and
 - b. has specified, in accordance with R18-11-212, that exceptions to R18-11-204.D, R18-11-206, R18-11-209 shall be allowed.
9. "Nearest downstream listed surface water segment" means the first surface water listed in Appendix A that is encountered when proceeding downstream from a surface water which is not listed in Appendix A.
10. "Ninetieth (90) percentile" is defined as the value which may not be exceeded by more than ten percent of the observations in a consecutive twelve month period, provided that at least ten values are determined at a frequency of not less than ten calendar days.

11. "Nutrient" means any substance found in a water which does, or could under certain circumstances, promote the growth of aquatic plant life.

12. "Oil" means petroleum in any form, including but not limited to crude oil, gasoline, fuel oil, diesel oil, lubricating oil, or sludge.

13. "Protected uses" are water-related activities that are recognized by the Council as reasonable uses of the State's surface waters. R18-11-207 describes protected used. Appendix A lists protected uses for Arizona surface water segments. Appendix B contains allowable limits for each protected use.

14. "Surface waters" means waters of the State, as defined in A.R.S. §45-101.

15. "Surface water segment" means a stream, stream segment, lake or impoundment.

16. "Surface water standards" means these water quality standards for surface waters of the state: Title 18, Chapter 11, Articles 1, 2, and 3.

17. "Unique waters" means those surface water segments classified by the Council pursuant to R18-11-303 as being outstanding public resources, or water of exceptional recreational or ecological significance.

18. "Violation of water quality standards" means any occurrence in which prescribed water quality attributes or specific allowable limits are not met, except as expressly provided in these Rules.

19. "Warm water fishery" means waters having an environment suitable for the propagation and habitation of fresh water fishes other than salmonids.

20. "Wholly private waters" means those private waters closed to all public uses and not discharging into or polluting any other waters of the State.

21. "Zone of passage" means a continuous water route of the volume, cross-sectional area, and quality necessary to allow passage of free-swimming and/or drifting organisms with no significant effect produced on the aquatic population.

Arkansas⁴

Not specified

California⁵

See State Standards for specific definitions.

Colorado⁶

- (1) "ACT" means the Colorado Water Quality Control Act, C.R.S. 1973, 25-8-101 et seq., as amended.
- (2) "ANTIDegradation STANDARD" means the standard established in Section 3.1.8.
- (3) "BASIC STANDARDS" means those standards as established in Section 3.1.11.
- (4) "BENEFICIAL USES" means those uses of the waters of the State to be protected such as those identified in the classification system.
- (5) "BMP" (Best Management Practices) means a practice or a combination of practices that is determined by a governmental agency after problem assessment, examination of alternative practices, and appropriate public participation, to be the most effective practicable (including technological, economic, and institutional considerations) means of preventing or reducing the amount of pollution generated by nonpoint sources to a level compatible with quality goals.
- (6) "COMMISSION" means the Colorado Water Quality Control Commission.
- (7) "DIVISION" means the Division of Administration of the Colorado Department of Health of which the Water Quality Control Division is a part.
- (8) "FEDERAL ACT" means the Clean Water Act, U.S.C. Section 1251 et seq., as amended.
- (9) "LC50" means the concentration of a parameter that is lethal to 50% of the test organisms within a defined time period.
- (10) "MIXING ZONE" means that area of a water body designated on a case-by-case basis by the Division which is contiguous to a point source in which standards may not apply.
- (11) "NUMERIC VALUE" means the measured concentration of a parameter.
- (12) "PARAMETER" means the chemical constituents or other characteristics of the water such as algae, fecal coliform, total dissolved solids, dissolved oxygen, or the magnitude of radioactivity levels, temperature, pH, and turbidity, or other relevant characteristics.

(13) "PERMIT" means a National Pollutant Discharge Elimination System (NPDES) permit or other state water quality permit.

(14) "SALINITY" means total dissolved solids (TDS).

(15) "STANDARD" means a narrative and/or numeric restriction established by the Commission applied to waters of the State to protect one or more beneficial uses of such waters. Whenever only numeric or only narrative standards are intended, the wording shall specifically designate which is intended.

(16) "TABLES" means Tables I, II, III, and IV appended to the Regulations, which set forth accepted levels for various parameters which will generally protect the beneficial uses of the waters of the State. These Tables are not adopted as regulations.

(17) "USES" - see Beneficial uses.

(18) "WATERS OF THE STATE" means any and all surface and subsurface waters which are contained in or flow in or through this State except waters in sewage system, waters in treatment works of disposal systems, waters in potable water distribution systems, and all water withdrawn for use until use and treatment have been completed. "Waters of the State," "waters," "State waters," and "water bodies" are used interchangeably and mean surface and groundwaters of Colorado coming under the above definition. Whenever only surface or only groundwater is intended, the wording shall specifically designate which is intended.

(19) "WATER QUALITY STANDARD" means standard.

Connecticut⁷

Not specified

Delaware⁸

Acute toxicity: Any poisonous effect produced within a short period of time (sub-life cycle), resulting in severe biological harm and often death.

Agriculture: The use of land and water in the production of food, fiber and timber products.

Antidegradation statement: Any provision or policy that has as its basis the prevention of deterioration of water quality or designated uses.

Average: Unless otherwise noted, the arithmetic mean of a representative group of samples for a specified parameter. Representativeness shall be determined

through application of appropriate statistical techniques to data collected at times of critical ambient conditions, as determined on a parameter-by-parameter basis.

Background: The biological, chemical, and/or physical conditions of a water body measured at a point upstream of the influence of the discharge or other pollution source, but downstream from other pollution sources.

Best management practice: Methods, measures or practices utilized by an entity to meet its non-point source control needs. Controls may be structural or non-structural, and/or involve operation and maintenance procedures. Controls may be applied before, during, or after the pollution-producing activities to reduce or eliminate the introduction of pollutants into receiving waters.

Chronic toxicity: Any poisonous effect, often characterized by impaired function and/or reproduction, that occurs over the life cycle of an organism.

Cold water fish use: Protection of fish species (such as from the family Salmonidae) and other flora and fauna indigenous to a cold water habitat.

Control structure: A dam, weir or other structure placed by man to regulate stream flow and/or create an impoundment.

Criterion: A standard of judgment (usually with a scientific basis) used to test the suitability of a water body for a particular purpose.

Degradation: Any adverse change in water quality.

Department: Department of Natural Resources and Environmental Control.

Designated Uses: Categories of surface water utilization for which the Department herein sets standards of protection.

Diadromous: Describes fish which migrate to and from saltwater and freshwater for the purpose of spawning.

Ephemeral: Describes a stream which contains flowing water only for short periods following precipitation events.

Fish, Aquatic Life and Wildlife: All animal and plant life found in Delaware, either indigenous or migratory, regardless of life stage or economic importance.

Foam: Frothy, generally stable, whitish mass of bubbles formed on or in the water upon agitation of the water.

Fresh waters: All waters that under natural conditions have an average chloride ion concentration less than 250 mg/L.

Industrial water supply: Any water that is protected for use for industrial purposes, including non-contact cooling water.

Indigenous: Native, growing, existing, or produced naturally.

Intermittent: Describes a stream which contains flowing water for extended periods during a year, but does not carry flow at all times.

Mixing Zone: The region of the receiving water in the vicinity of a discharge in which dilution and dispersion of effluent are to occur. The requirements of Section 5 of this document shall apply.

Low flow: A statistically determined, freshwater stream-specific flow, which has a defined duration and recurrence interval.

Natural conditions: Water quality characteristics which would exist in the absence of point source discharges and with all non-point sources employing reasonable and cost-effective best management practices.

Nuisance condition: Any condition that, as a by-product of pollutant addition to a stream, is unsightly, offensive, troublesome, or inconvenient to human users of the waters or the adjoining land areas.

Nuisance species: Any species of fish, other animal, or plant living in or near the water that is generally regarded as offensive or troublesome.

Nutrient: Any element or compound essential as a raw material for organism growth and development. Specific examples include nitrogen and phosphorus.

Overenrichment: Excessive addition of nutrients to a water body, resulting in deterioration of designated uses of the waters.

Perennial: Describes a freshwater stream which contains flowing water at all times.

Primary contact recreation: Any water-based form of recreation, the practice of which has a high probability for total body immersion and/or ingestion of water.

Propagation: Reproduction of fish, aquatic life and wildlife within their natural environment.

Public water supply: Any stream or impoundment which is approved for use as a source of drinking water for human consumption.

Scum: A thin layer of impurities which forms on the surface of streams.

Salt water: All waters which under natural conditions have an average chloride level of 250 mg/L or greater.

Secondary contract recreation: A water-based form of recreation, the practice of which has a low probability for total body immersion and/or ingestion of water.

Shellfish: Any species of fresh, brackish or salt water mollusk that is commonly considered to be edible. Typical edible mollusks include clams, mussels, oysters, scallops, and whelks.

Standard: A rule or limit for a specific water quality parameter established by a legal authority.

Stream basin: A specified drainage area from which (in most cases) all waters exit through a single outlet.

Tidal: Having water elevation subject to effect from oceanic tides.

Toxic substance: Any substance or combination of substances including disease-causing agents, which after discharge and upon exposure, ingestion, inhalation, or assimilation into any organism, either directly from the environment or indirectly by ingestion through food chains, will cause death, disease, behavioral abnormalities, cancer, genetic

mutations, physiological malfunctions (including malfunctions in reproduction), or physical deformities in such organisms or their offspring.

Water of exceptional recreational or ecological significance: Waters which are important, unique, or sensitive from a recreational and/or ecological perspective, but which may or may not have excellent water quality.

Florida⁹

(1) "Acute Toxicity" shall mean the presence of one or more substances or characteristics or components of substances in amounts which:

(a) are greater than one-third (1/3) of the amount lethal to 50% of the test organisms in 96 hours (96 hr. LC50) where the 96 hr LC50 is the lowest value which has been determined for a species significant to the indigenous aquatic community; or

(b) may reasonably be expected, based upon evaluation by generally accepted scientific methods, to produce effects, equal to those of the concentration of the substance specified in (a) above.

(2) "Background" shall mean the condition of waters in the absence of the activity or discharge under consideration, based on the best scientific information available to the Department.

(3) "Chronic Toxicity" shall mean the presence of one or more substances or characteristics or components of substances in amounts which:

(a) are greater than one-twentieth (1/20) of the amount lethal to 50% of the test organisms in 96 hours (96 hr. LC50) where the 96 hr. LC50 is the lowest value which has been determined for a species significant to the indigenous aquatic community; or

(b) may reasonably be expected based upon evaluation by generally accepted scientific methods to produce effects equal to those of the concentration of the substance specified in (a) above.

(4) "Commission" shall mean the Environmental Regulation Commission.

(5) "Compensation Point for Photosynthetic Activity" shall mean the depth at which one percent of the light intensity at the surface remains unabsorbed. The light intensities at the surface or by irradiance

meters such as the Kahlsico Underwater Irradiameter, Model no. 268 WA 310 or other devices having a comparable spectral response.

(6) "Department" shall mean the Department of Environmental Regulation.

(7) "Designated Use" shall mean the present and future most beneficial use of a body of water as designated by the Environmental Regulation Commission by means of the classification system contained in this Chapter.

(8) "Dominance" shall mean the presence of species of communities in greater numbers, biomass, or areal extent than competing species or communities, or a scientifically accepted tendency of species or communities to achieve such a status under existing or reasonably anticipated conditions.

(9) "Effluent Limitation" shall mean any restriction established by the Department on quantities, rates or concentrations of chemical, physical, biological or other constituents which are discharged from sources into waters of the state.

(10) "Exceptional Ecological Significance" shall mean that a water body is part of an ecosystem of unusual value. The exceptional significance may be in unusual species, productivity, diversity, ecological relationships, ambient water quality, scientific or educational interest, or in other aspects of the ecosystem's setting or processes.

(11) "Exceptional Recreational Significance" shall mean unusual value as a resource for outdoor recreation activities. Outdoor recreation activities, include, but are not limited to, fishing, boating, canoeing, water skiing, swimming, scuba diving, and nature observation. The exceptional significance may be in the intensity of present recreational usage, an unusual quality of recreational experience, or in the potential for unusual future recreational use or experience.

(13) "Groundwater" shall mean water beneath the surface of the ground within a zone of saturation, whether or not flowing through known and definite channels.

(14) "Natural Background" shall mean the condition of waters in the absence of man-induced alterations based on the best scientific information available to the Department. The establishment of natural background

for an altered waterbody may be based upon a similiar unaltered waterbody or on historical pre-alteration data.

(15) "Nuisance Species" shall mean species of flora or fauna whose noxious characteristics or presence in sufficient number, biomass, or areas extent may reasonably be expected to prevent, or unreasonably interfere with, a designated use of those waters.

(16) "Nursery Area of Indigenous Aquatic Life" shall mean any bed of the following aquatic plants, either in monoculture or mixed: Halodue spp., Halophila engelmannii, Potamogeton spp., (pondweed), Ruppia maritima (widgeon-grass), Sagittaria spp. (arrowhead), Syringodium filiforme, (manatee-grass), Thalassia testudinum (turtle grass), or Vallisneria spp. (eel-grass), or any area used by the early-life stages, larvae and post-larvae, of aquatic life during the period of rapid growth and development into the juvenile stages.

(17) "Pollution" shall mean the presence in the outdoor atmosphere or waters of the state of any substances, contaminants, noise, or man-made or man-induced alteration of the chemical, physical, biological or radiological integrity of air or water in quantities or levels which are or may be potentially harmful or injurious to human health or welfare, animal or plant life, or property, including outdoor recreation.

(18) "Predominantly Fresh Waters" shall mean surface waters in which the chloride concentration at the surface is less than 1500 mg/L.

(19) "Predominantly Marine Waters" shall mean those surface waters in which the chloride concentration at the surface is greater than or equal to 1500 mg/L.

(20) "Propagation" shall mean reproduction sufficient to maintain the species' role in its respective ecological community.

(22) "Secretary" shall mean the Secretary of the Department of Environmental regulation.

(23) "Shannon-Weaver Diversity Index" shall mean: negative summation ($i=1$ to S) of $(n_i/N) \log_2 (n_i)$ where S is the number of species in a sample, n_i is the total number of individuals in species i .

(24) "Special Waters" shall mean water bodies designated in accordance with 17-3.041 by the

Environmental Regulation Commission for inclusion in the Special Waters Category of Outstanding Florida Waters, as contained in Section 17-3.041, Florida Administrative Code. A Special Water may include all or part of any water body.

(25) "Surface Water" means water upon the surface of the earth, whether contained in bounds created naturally or artificially or diffused. Water from natural springs shall be classified as surface water when it exits from the spring onto the earth's surface.

(26) "Waters" shall be defined in Section 403.031 (3), Florida Statutes.

(27) "Zone of Discharge" shall mean a volume underlying or surrounding the site and extending to the base of a specifically designated aquifer or aquifers, within which an opportunity for the treatment, mixture or dispersion of wastes into receiving groundwaters has been afforded.

(28) "Zone of Mixing" or "Mixing Zone" shall mean a volume of surface water containing the point or area of discharge and within which an opportunity for the mixture of wastes with receiving surface waters has been afforded.

Georgia¹⁰

All terms used in this Paragraph shall be interpreted in accordance with definitions as set forth in the Act and as otherwise herein defined:

(a) "reasonable and necessary uses" means drinking water supplies, conservation of fish, game and other aquatic life, agricultural, industrial, recreational, and other legitimate uses.

(b) "Shellfish" refers to clams, oysters, scallops, mussels, and other mollusks.

(c) "Intake temperature" is the natural or background temperature of a particular waterbody unaffected by any man-made discharge or thermal input.

(d) "Coastal waters" are those littoral recreational waters on the ocean side of the Georgia coast.

Hawaii¹¹

"Ambient conditions" means the water quality conditions that would occur in the receiving waters if these waters were not influenced by the proposed new human activity.

"Brackish waters" means waters with dissolved inorganic ions (salinity) greater than 0.5 parts per thousand, but less than 30 parts per thousand.

"Fresh waters" means all waters with dissolved inorganic ions of less than 0.5 parts per thousand.

"Saline waters" means water with dissolved inorganic ions greater than 30 parts per thousand.

"State waters" means all waters, fresh, brackish, or salt, around and within the State of Hawaii which includes all the islands of the Hawaiian Archipelago together with their appurtenant reefs and waters except the Midway Islands.

"Best degree of treatment or control" means that treatment or control which is required by applicable statutes and regulations of the State of Hawaii and the Federal Water Pollution Control Act, as amended, or which is otherwise specified by the Director considering technology or management practices currently available in relation to the public interest.

"Streams" means seasonal or continuous water flowing in all or part of natural channels as a result of either surface water runoff or ground water influx, or both. Streams may be either "perennial" or "intermittent".

"Perennial streams" means fresh waters flowing down altitudinal gradients in definite natural channels, portions of which may be modified. In such streams, flowing water is present all year though volume may vary. Such streams may be continuous, with water flowing to the ocean all year, or interrupted, having flow and/or ecologically significant bodies of water only in parts of the channel, with seasonal discharge to the ocean.

"Intermittent streams" means fresh water flowing down altitudinal gradients in definite natural channels only during part of the year.

"Spring and seeps" means small, perennial, relatively constant fresh water flows not in distinct channels, such as wet films, or trickles over rock surfaces, in which the water emanates from elevated aquifers. Springs and seeps may be either stream associated, occurring in deeply cut valleys and contributing to stream flow; or coastal, occurring on coastal cliffs and usually flowing into the ocean.

"Natural lakes" means deep standing water that is always fresh, in well-defined natural basins.

"Reservoirs" means deep standing water that is always fresh, in well defined artificially created impoundments.

"Elevated wetlands" means shallow standing water that is always fresh, in more or less indistinct basins such as natural bogs, ponds, and marshes. Such wetlands are found in undisturbed areas, mainly remote uplands and forest reserves.

"Low wetlands" means shallow standing water that is always fresh, ponds or marshes. Such wetlands are found in lowland areas near coasts or in valley termini modified by man. Their origin may be natural or man-made.

"Coastal wetlands" means natural or man-made ponds and marshes having variable salinity, basin limits, and permanence. Such wetlands usually adjoin the coastline but are not surface connected to the ocean except in rare circumstances. They are usually without tidal fluctuations. Most are characterized by introduced biota, especially fishes.

"Anchialine pools" means standing waters that vary in salinity and basin limits and are not surface connected to the ocean except in rare circumstances. Such pools are natural brackish water exposures which are near coastlines in recent lavas and rarely, in fossil reefs and which have tidal fluctuations. They are usually small, shallow pools of low salinity one to ten parts per thousand with distinctive biota but usually no fishes. The bottom of deeper pools may have higher salinities.

"Estuaries" means deep characteristically brackish coastal waters in well-defined basins with a continuous or seasonal surface connection to the ocean that allows entry of marine fauna. Estuaries may be either natural, occurring mainly at stream or river mouths; or developed, artificially or strongly modified from the natural state, such as dredged and revetted stream termini.

Idaho¹²

DEFINITIONS AND ABBREVIATIONS. For the purpose of the rules contained in Title 1, Chapter 2, the following definitions and abbreviations apply: (1-30-80)

01. Appropriate Beneficial Use. Any of the various uses which may be made of the water of Idaho, including, but not limited to, domestic water

supplies, industrial water supplies, agricultural water supplies, navigation, recreation in and on the water, wildlife habitat, and aesthetics. Appropriateness is dependent upon actual use, the ability of a water to support a non-existing use either now or in the future, and its likelihood of being used in a given manner. The use of a water for the purpose of wastewater dilution or as a receiving water for a waste treatment facility effluent is not an appropriate beneficial use.

(1-30-80)

02. Best Management Practice. A practice or combination of practices determined by the Department to be the most effective and practicable means of preventing or reducing the amount of pollution generated by nonpoint sources.
(1-1-85)
03. Biochemical Oxygen Demand (BOD). The measure of the amount of oxygen necessary to satisfy the biochemical oxidation requirements of organic materials at the time the sample is collected; unless otherwise specified, this term will mean the five (5) day BOD incubated at 20°C.
(6-28-73)
04. Biota. The plants and animals of a specified area.
(1-30-80)
05. Board. The Board of Health and Welfare.
(1-30-80)
06. Daily Average. The average of measurements made over a twenty-four (24) hour period. (1-30-80)
07. Deleterious Material. Any substance which may cause the tainting of edible species of fish, taste and odors in drinking water supplies, or the reduction of the usability of water without causing physical injury to water users.
(1-30-80)
08. Department. The Idaho Department of Health and Welfare.
(1-30-80)
09. Desirable Species. Species indigenous to the area or those introduced by the Department of Fish and Game.
(1-30-80)
10. Director. The Director of the Department of Health and Welfare or his authorized agent.
(1-30-80)

11. Discharge. When used without qualification, the release of a pollutant into the waters of the State. (1-30-80)
12. Disinfection. A method of reducing the pathogenic or objectionable organisms by means of chemicals or other acceptable means. (6-28-73)
13. Dissolved Oxygen (DO). The measure of the amount of oxygen dissolved in the water, usually expressed in mg/l.
14. Effluent. Any wastewater discharged from a treatment facility. (1-30-80)
15. EPA. The U.S. Environmental Protection Agency. (6-28-73)
16. Fecal Coliform. The portion of the coliform group of bacteria present in the gut and feces of warm-blooded animals, usually expressed as number of organisms/100 ml of sample. (1-30-80)
17. Full Protection, Full Support, or Full Maintenance of Protected Beneficial Uses of Water. Compliance with those levels of water quality criteria listed in Idaho Department of Health and Welfare Rules and Regulations Sections 01.2200 and 01.2250. (3-3-87)
18. Geometric Mean. The geometric mean of "n" quantities is the "nth" root of the product of the quantities. (6-28-73)
19. Groundwater. Subsurface water comprising the zone of saturation.
20. Hazardous Material. A material or combination of materials which, when discharged in any quantity into State waters, presents a substantial present or potential hazard to human health, the public health, or the environment. Unless otherwise specified, published guides such as Quality Criteria for Water (1976) by E.P.A., Water Quality Criteria (Second Edition, 1963) by the State of California Water Quality Control Board, their subsequent revisions, and more recent research papers, regulations and guidelines will be used in identifying individual and specific materials and in evaluating the tolerances of the identified materials for the beneficial uses indicated. (1-30-80)

21. Hypolimnion. The deepest zone in a thermally-stratified body of water. It is fairly uniform in temperature and lies beneath a zone of water which exhibits a rapid temperature drop with depth of at least 1°C per meter. (1-30-80)
22. Inter-Departmental Coordination. Consultation with those agencies responsible for enforcing or administering the practices listed as approved best management practices in Idaho Department of Health and Welfare Rules and Regulations Section 01.2300,05. (3-3-87)
23. Land Application. A process of activity involving application of wastewater, surface water, or semi-liquid material to the land surface for the purpose of disposal, pollutant removal, or groundwater recharge. (1-1-85)
24. Man-made Waterways. Canals, flumes, ditches, and similar features, constructed for the purpose of water conveyance. (1-30-80)
25. Milligrams Per Liter (mg/l). Milligrams of solute per liter of solution, equivalent to parts per million, assuming unit density.
26. Mixing Zone. A defined area or volume of the receiving water surrounding or adjacent to a wastewater discharge where the receiving water, as a result of the discharge, may not meet all applicable water quality criteria or standards. It is considered a place where wastewater mixes with receiving water and not as a place where effluents are treated. (1-30-80)
27. Nonpoint Source. A geographical area on which pollutants are deposited or dissolved or suspended in water applied to or incident on that area, the resultant mixture being discharged into the waters of the State. Nonpoint sources include but are not limited to: (1-30-80)
- a. Irrigated and nonirrigated lands used for: (1-30-80)
 - i. Grazing; and (1-30-80)
 - ii. Crop production; and (1-30-80)
 - iii. Silviculture; and (1-30-80)
 - b. Log storage or rafting; and (1-30-80)

- c. Construction sites; and (1-30-80)
 - d. Recreation sites; (1-30-80)
 - e. Septic tank disposal fields; and (1-30-80)
 - f. Other sources and activities not subject to regulation under Federal National Pollutant Discharge Elimination System. (1-30-80)
28. Nuisance. Anything which is injurious to the public health or an obstruction to the free use, in the customary manner, of any waters of the State. (1-1-85)
29. Nutrients. The major substances necessary for the growth and reproduction of aquatic plant life, consisting of nitrogen, phosphorus, and carbon compounds. (1-30-80)
30. Person. An individual, corporation, partnership, association, state, municipality, commission, political subdivision of the state, state agency, federal agency, special district or interstate body. (1-30-80)
31. Petroleum Products. Products derived from petroleum through various refining processes. (1-30-80)
32. Point Source. Any discernible, confined, and discrete conveyance, including but not limited to any pipe, ditch, channel, tunnel, conduit, well, discrete fissure, container, rolling stock, concentrated animal feeding operation, or vessel or other floating craft, from which pollutants are, or may be, discharged. This term does not include return flows from irrigated agriculture, discharges from dams and hydroelectric generating facilities or any source or activity considered a nonpoint source by definition. (1-10-86)
33. Pollutant. Dredged spoil, solid waste, incinerator residue, sewage, garbage, sewage sludge, munitions, chemical waste, biological materials, radioactive materials, heat, wrecked or discarded equipment, rock, sand, silt, cellar dirt; and industrial, municipal and agricultural waste, gases entrained in water; or other materials which, when discharged to water in excessive quantities, cause or contribute to water pollution. (1-30-80)

34. Potable Water. A water which is free from impurities in such amounts that it is safe for human consumption without treatment. (1-1-85)
35. Primary Treatment. Processes or methods that serve as the first stage treatment of wastewater, intended for removal of suspended and settleable solids by gravity sedimentation; provides no changes in dissolved and colloidal matter in the sewage or wastes flow. (1-30-80)
36. Project Plans. Documents which describe actions to be taken under a proposed activity. These documents include environmental impact statements, environmental assessments, and other land use or resource management plans. (2-2-83)
37. Receiving Waters. Those waterways which receive pollutants from point or nonpoint sources. (1-30-80)
38. Recharge. The process of adding water to the zone of saturation. (1-1-85)
39. Recharge Water. Water that is specifically utilized for the purpose of adding water to the zone of saturation. (1-1-85)
40. Saturated Zone. Zone or layer beneath the earth's surface in which all of the pore spaces of rock or soil are filled with water. (1-1-85)
41. Schedule of Compliance. A schedule of remedial measures which may include an enforceable sequence of actions or operations leading to compliance with an effluent limitation, other limitation, prohibition, or standard. (6-28-73)
42. Secondary Treatment. Processes or methods for the supplemental treatment of wastewater, usually following primary treatment, to affect additional improvement to the quality of the treated wastes by biological means of various types which are designed to remove or modify organic matter. (1-30-80)
43. Sewage. The water-carried human or animal waste from residences, buildings, industrial establishments or other places, together with such groundwater infiltration and surface water as may be present. (1-30-80)

44. Sludge. The semi-liquid mass produced by partial dewatering of potable or spent process waters or wastewater. (1-30-80)
45. Special Resource Water. Those specific segments or bodies of water which are recognized as needing intensive protection: (1-30-80)
- a. To preserve outstanding or unique characteristics; or (1-30-80)
 - b. To maintain current beneficial use. (1-30-80)
46. Specialized Best Management Practices. Those practices designed with consideration of geology, land type, soil type, erosion hazard, climate and cumulative effects in order to fully protect the beneficial uses of water, and to prevent or reduce the pollution generated by nonpoint sources. (3-3-87)
47. State. The State of Idaho. (6-28-73)
48. Subsurface Disposal. Disposal of effluent below ground surface, including, but not limited to, drainfields or sewage beds. (1-30-80)
49. Suspended Sediment. Organic and inorganic particulate matter which has been removed from its site of origin and measured while suspended in surface water. (1-1-85)
50. Treatment. A process of activity conducted for the purpose of removing pollutants from wastewater. (1-30-80)
51. Treatment System. Any physical facility or land area for the purpose of collecting, treating, neutralizing or stabilizing pollutants including treatment by disposal plants, the necessary intercepting, outfall and outlet sewers, pumping stations integral to such plants or sewers, equipment and furnishing thereof and their appurtenances. (1-1-85)
52. Trihalomethan (THM). THM means one of the family of organic compounds named as derivatives of methane, wherein three (3) of the four (4) hydrogen atoms in the molecular structure of methane are substituted by one (1) of the chemical elements chlorine, bromine or iodine. (1-1-85)

53. Unique Ecological Significance. The attribute of any stream of water body which is inhabited or supports an endangered species of plant or animal or a species of special concern identified by the Department of Fish and Game, which provides anadromous fish passage, or which provides spawning or rearing habitat for anadromous or desirable species of lake dwelling fishes.

(1-30-80)

54. Wastewater. Unless otherwise specified, sewage, industrial waste, agricultural waste, and associated solids or combinations of these, whether treated or untreated, together with such water as is present.

(1-30-80)

55. Water Pollution. Any alteration of the physical, thermal, chemical biological, or radioactive properties of any waters of the State, or the discharge of any pollutant into the waters of the State, which will or is likely to create a nuisance or to render such waters harmful, detrimental or injurious to public health, safety or welfare, or to domestic, commercial, industrial, recreational, aesthetic, or other beneficial uses.

(1-30-80)

56. Waters and Waters of the State. All the accumulations of water, surface and underground, natural and artificial, public and private, or parts thereof which are wholly or partially within, which flow through or border upon the State.

(1-30-80)

Illinois¹³

Act: means the Illinois Environmental Protection Act.

Administrator: means the Administrator of the United States Environmental Protection Agency or his designee.

Agency: means the Illinois Environmental Protection Agency.

Aquatic Life: means native populations of fish and other aquatic life.

Artificial Cooling Lake; means any manmade lake, reservoir or other impoundment, constructed by damming the flow of a stream, which is used to cool the waters discharged from the condensers of a steam-electric generating plant for recirculation in substantial part to the condensers.

Basin: means the area tributary to the designated body of water.

Board: means the Illinois Pollution Control Board

Calumet River System: means the Calumet River, the Grand Calumet River, the Little Calumet River downstream from its confluence with the Grand Calumet, the Calumet-Sag Channel, and the Calumet Harbor Basin.

Chicago River System: means the Chicago River and its Branches, the North Shore Channel, and the Chicago Sanitary and Ship Canal.

Combined Sewer: means a sewer designed and constructed to receive both wastewater and land runoff.

Combined Sewer Service Area: means a specified geographical drainage area served by a combined sewer system. Areas served by separate sewer systems which enter the combined system are not included. Undeveloped areas within a combined sewer service area may be included in that area if deemed appropriate by the Agency pursuant to the guidelines in Rule 602(a).

Construction: means commencement of on-site fabrication, erection, or installation of a treatment works, sewer, or wastewater source; or the reinstallation at a new site of any existing treatment works, sewer or wastewater source.

Dilution Ratio: means the ratio of the seven-day once in ten year low flow of the receiving stream or the lowest flow of the receiving stream when effluent discharge is expected to occur, whichever is greater, to the average flow of the treatment works for the design year.

Effluent: means any wastewater discharged, directly or indirectly, to the waters of the State or to any storm sewer, and the runoff from land used for the disposition of wastewater or sludges, but does not otherwise include nonpoint source discharges such as runoff from land or any livestock management facility or livestock waste handling facility subject to regulation under Chapter 5 of the regulations of the Pollution Control Board.

"FWPCA" means the Federal Water Pollution Control Act, as amended, 33 U.S.C. 1251 et seq. Public Law 92-500, enacted by the Congress October 18, 1972, as amended.

Hearing Board: shall mean an Agency hearing board of one or more employees appointed by the Director in

accordance with the requirements of Rule 909(b) hereof, which shall conduct public hearings and make recommendations to the Agency with respect to the issuance or denial of NPDES permits.

Industrial Wastes: means any solid, liquid, or gaseous wastes resulting from any process or excess energy resulting from any progress of industry, manufacturing, trade, or business or from the development processing or recovery, except for agricultural crop raising, of any natural resource.

Institute: means the Illinois Institute of Natural Resources.

Interstate Waters: are all waters which cross or form part of the border between Illinois and other states.

Intrastate Waters: are all the waters of Illinois which are not interstate waters.

Land Runoff: means water reaching the waters of the State as runoff resulting from precipitation.

Marine Toilet: means any toilet on or within any watercraft.

Modification means:

(1) Any physical change in a treatment works which involves different or additional processes or equipment or which increases or decreases the capacity or efficiency of the treatment works; or

(2) Any change in the number or location of points where effluent is discharged, directly or indirectly to the waters; or

(3) Any change in any components of a sewer system which alters the quantity of wastewater capable of being conveyed, or which increases or decreases the quantity of wastewater capable of being discharged at overflow or bypass structures; or

(4) Any increase in quantity or strength of a discharge from any wastewater source, unless such increase does not exceed an upper limit specifically allowed by an existing Permit granted by the Agency and does not involve any additional contaminants contained in standards set by this Chapter that are not itemized and approved in an existing Agency permit.

New Source: means any wastewater source, the construction of which is commenced on or after the effective date of the applicable provisions of this Chapter.

NPDES: means the National Pollutant Discharge Elimination system for issuing, establishing conditions for, and denying permits under Section 402 of the FWPCA. All terms used in connection with NPDES which have been defined in the FWPCA or regulations adopted thereunder shall have the meanings specified therein, unless specifically noted otherwise.

Other Wastes: means garbage, refuse, wood residues, sand, lime, cinders, ashes, offal, night soil, silt, oil, tar, dye stuffs, acids, chemicals and all other substances not sewage or industrial waste whose discharge would cause water pollution or a violation of the effluent or water quality standards.

Person: means any individual, partnership, copartnership, firm, company, corporation, association, joint stock company, trust, estate, political subdivision, state agency, or any other legal entity, or their legal representative, agent or assigns.

Pollutant: means dredged spoil, solid waste, incinerator residue, sewage, garbage, sewage sludge, munitions, chemical wastes, biological materials, radioactive materials, heat, wrecked or discarded equipment, rock, sand, cellar dirt and industrial, municipal and agricultural waste discharged into water. This term does not mean (A) 'sewage from vessels' within the meaning of the FWPCA; or (B) water, gas, or other material which is injected into a well to facilitate production and disposed of in a well, if the well used either to facilitate production or for disposal purposes is approved by the Department of Mines and Minerals, and if the Department of Mines and Minerals determines that such injection or disposal will not result in the degradation of ground or surface water resources.

Population Equivalent: is a term used to evaluate the impact of industrial or other waste on a treatment works or stream. One population equivalent is 100 gallons of sewage per day, containing 0.17 pounds of BOD5 and 0.20 pounds of suspended solids. The impact on a treatment works is evaluated as the equivalent of the highest of the three parameters. Impact on a stream is the higher of the BOD5 and suspended solids parameters.

Pretreatment Works: means a treatment works designed and intended for the treatment of wastewater from a major contributing industry, as defined in 40 CFR 128, before introduction into a sewer system tributary to a public owned or public regulated treatment works.

(Editor's note: The federal Environmental Protection Agency June 26, 1978 (43 FR 27736) replaced 40 CFR 128 - Pretreatment Standards - with 40 CFR 403-General Pretreatment Regulations for Existing and New Sources of Pollution, effective August 25, 1978)

Primary contact: means any recreational or other water use in which there is prolonged and intimate contact with the water involving considerable risk of ingesting water in quantities sufficient to pose a significant health hazard, such as swimming and water skiing.

Public and Food Processing Water Supply: means any water use in which water is withdrawn from surface waters of the State for human consumption or for processing of food products intended for human consumption.

Publicly Owned Treatment Works: means a treatment works owned by a municipality, sanitary district, county, or state or federal agency, and which treats domestic and industrial wastes collected by a publicly owned or regulated sewer system. Industrial treatment works which are publicly owned and financed by bond issues of public agencies are not included in this definition.

Publicly Regulated Treatment Works: means those otherwise private companies which are regulated as public utilities engaged in the disposal of domestic and industrial wastes and regulated as such by the Illinois Commerce Commission, pursuant to an Act concerning Public Utilities, Illinois Revised Statutes 1977, CH.111 2/3; par.1 et seq.

Sanitary Sewer: means a sewer that carries wastewater together with incidental land runoff.

Secondary Contact: means any recreational or other water use in which contact with the water is either incidental or accidental and in which the probability of ingesting appreciable quantities of water is minimal, such as fishing, commercial and recreational boating and any limited contact incident to shoreline activity.

Sevage: means water carried human and related wastes from any source.

Sewer: means a stationary means of transport or stationary system of transport, excluding natural waterways, constructed and operated for the purpose of collecting and transporting wastewater or land runoff, or both.

Standard of Performance: means a standard for the control of the discharge of pollutants, promulgated by the Administrator pursuant to Section 306 of the FWPCA, for the control of the discharge of pollutants which reflects the greatest degree of effluent reduction which the Administrator determines to be achievable through application of the best available demonstrated control technology, processes, operating methods, or other alternatives, including, where practicable, a standard permitting no discharge of pollutants.

STORET: means the national water quality data system of the Federal Environmental Protection Agency.

Storm Sewer: means a sewer intended to receive only land runoff.

Treatment Works: means individually or collectively those constructions or devices, (except sewers, and except constructions or devices used for the pretreatment of wastewater prior to its introduction into publicly owned or regulated treatment works) used for collecting, pumping, treating, or disposing of wastewaters or for the recovery of by-products from such wastewater.

Underground Waters: means any waters of the state located beneath the surface of the earth.

Wastewater: means sewage, industrial waste, or other waste, or any combination of these, whether treated or untreated, plus any admixed land runoff.

Wastewater Source: means any equipment, facility, or other point source of any type whatsoever which discharges wastewater, directly or indirectly (except through a sewer tributary to a treatment works), to the waters of the State.

Watercraft: means every type of boat, ship or barge used or capable of being used as a means of transportation on water.

Indiana¹⁴

Waters: means all accumulations of water, surface and underground, natural and artificial, public and private, or parts thereof, which are wholly or partially within, flow through, or border upon the State of Illinois, except that sewers and treatment works are not included except as specifically mentioned; provided, that nothing therein contained shall authorize the use of natural or otherwise protected waters as sewers or treatment works except that in-stream aeration under Agency permit is allowable.

Advanced Treatment - Treatment in excess of that which can be provided by secondary treatment.

Application Factor - A numerical factor applied to the median lethal concentration to provide the concentration of a toxic substance that is considered to be safe for organisms in the waters of the State.

Average - Unless otherwise specified, the arithmetical average of a set of numbers.

Board - The Water Pollution Control Board.

Coliform Bacteria - All the aerobic and facultatively anaerobic, gram-negative, nonsporeforming bacilli that produce acid and gas from the fermentation of lactose.

Community - A general collective term to describe the varieties of aquatic species and associated organisms living together in a water body.

Effluent - A wastewater discharge from a point source to the waters of the State.

Fecal Coliforms - Coliform bacteria that produce gas from lactose in a special, buffered broth incubated at 45.5°C.

Indigenous - An organism growing and reproducing in a particular region.

Mixing zone - An area contiguous to a discharge where, as a result of said discharge, receiving water quality may not meet all water quality standards. Any time an effluent is added to a receiving waterway where the effluent is poorer in quality, there will be a zone of mixing. The mixing zone should be considered a place where wastes and receiving waters mix and not as a place where effluents are treated.

Partial Body Contact - Any contact with water up to, but not including, complete submergence.

Point Source - A discernible, confined and discrete conveyance, from which wastewater is or may be discharged to the waters of the State.

Policy - As employed herein, a statement of administrative practice of decision-making guidelines to be followed or implemented to the maximum extent feasible with respect to an identified problematic situation but to be less than strictly enforceable in contrast to a standard or rule of law.

Potable Water Supply - Water considered satisfactory for domestic consumption which has physical, chemical, and bacteriological qualities that meet the requirements adopted by the Board.

Public Water Supply - Any wells, reservoirs, lakes, rivers, sources of supply, pumps, mains, pipes, facilities, and structures through which water is obtained, treated as may be required, and supplied through a water distribution system for sale to or consumption by the public for drinking, domestic, or other purposes, including State-owned facilities even though the water may not be sold to the public.

Secondary Treatment - Municipal waste water treatment facilities shall be defined as those necessary to meet 40 CFR, Part 133. Secondary treatment for combined sewer overflows shall be determined by the Board.

Semi-Public Wastewaters - Domestic wastewaters which are public in character although collected and treated by an entity other than a Federal, State, or Municipal governmental entity (with the exception of rural school corporation). An example would be wastewaters from a mobile home park or residential subdivision located outside municipal corporation boundaries which are collected and treated by a privately-owned sewage treatment facility.

Standard - A definite numerical value or narrative statement promulgated by the Board to maintain or enhance water quality to provide for and fully protect a designated use of the waters of the State.

Toxic Substances - Materials which are or may become harmful to plant or animal life, or to food chains when present in sufficient concentrations or combinations.

Waters of the State - Such accumulations of water, surface and underground, natural and artificial, public and private, or parts thereof, which are wholly

or partially within, flow through, or border upon, this State, but the term does not include any private pond, or any pond, reservoir or facility built for reduction or control of pollution or cooling of water prior to discharge unless the discharge therefrom causes or threatens to cause water pollution.

Water Use Designations - A use of the waters of the State as established by this regulation, including but not limited to industrial water supply, agricultural use, public water supply, total body contact, partial body contact, fish and other aquatic life.

Well-Balanced Fish Community - A fish community which is as diverse in species composition and as abundant in numbers or biomass at all levels as a particular aquatic habitat is capable of supporting.

Whole Body Contact - Direct contact with water to the point of complete submergence.

Iowa¹⁵

"Act" means the Federal Water Pollution Control Act as amended by the Federal Water Pollution Control Act Amendments of 1972 (pub.L 92-500, 86 Stat. 816 U.S.C. ss1251 et seq.

"Administrator" means the administrator of the United States Environmental Protection Agency (EPA) 401 "m" Street, S.W., Washington, D.C. 20460.

"ASTM" means "Annual Book of Standards, Part 31, Water, 1975". The publication is available from The American Society for Testing and Materials, 1916 Race St., Philadelphia, Pennsylvania 19103

"Best management practice" (BMP) means a practice or combination of practices that is determined, after problem assessment, examination of alternative practices, and appropriate public participation, to be the most effective, practicable (including technological, economic and institutional considerations) means of preventing or reducing the amount of pollution generated by nonpoint sources to a level compatible with water quality goals.

"Biochemical oxygen demand (five-day)" means the amount of oxygen consumed in the biological processes that break down organic matter in water by aerobic biochemical action in five days at 20°C.

"Continuing planning process" (CPP) means the continuing planning process, including any revision thereto, required by sections 208 and 303(e) of the Federal Water Pollution Control Act as amended (33

U.S.C.s 1288 and 1313(e) for state water pollution control agencies.

The continuing planning process is a time phased process by which the department, working co-operatively with designated areawide planning agencies:

a. Develops a water quality management decision-making process involving elected officials of state and local units of government and representatives of state and local executive departments that conduct activities related to water quality management.

b. Establishes an intergovernmental process (such as co-ordinated and co-operative programs with the state conservation commission in aquatic life and recreation matters, department of soil conservation in nonpoint source pollution control matters, and the natural resources council in water resources matters) which provides for water quality management decisions to be made on an areawide or local basis and for the incorporation of such decisions into a comprehensive and cohesive statewide program. Through this process, state regulatory programs and activities will be incorporated into the areawide water quality management decision process.

c. Develops a broad based public participation (such as utilization of such mechanisms as basin advisory committees composed of local elected officials, representatives of areawide planning agencies, the public at large, and conservancy district advisory committees) aimed at both informing and involving the public in the water quality management program.

d. Prepares and implements water quality management plans, which identify water quality goals and established state water quality standards, define specific programs, priorities and targets for preventing and controlling water pollution in individual approved planning areas and establish policies which guide decision-making over at least a twenty-year span of time (in increments of five years).

e. Based on the results of the statewide (state and areawide) planning process, develops the state strategy to be updated annually, which sets the state's major objectives, approach, and priorities for preventing and controlling pollution over a five-year period.

f. Translates the state strategy into the annual state program plan (required under section 106 of the Federal Act), which establishes the program objectives, identifies the resources committed for the state program each year, and provides a mechanism for reporting progress toward achievement of program objectives.

g. Periodically reviews and revises water quality standards as required under Section 303(c) of the Federal Act.

"CFR" means the Code of Federal Regulations as published by the Superintendent of Documents, U.S. Government Printing Office, Washington, D. C. 20402.

"Deep well" means a well located and constructed in such a manner that there is a continuous layer of low permeability soil or rock at least five feet thick located at least 25 feet below the normal ground surface and above the aquifer from which water is to be drawn.

"Department" means the department of environmental quality.

"EPA Methods" means "Methods for Chemical Analysis of Water and Wastes," 1974, Methods Development and Quality Assurance Research Laboratory, National Environmental Research Center, Cincinnati, Ohio 45268; U.S. Environmental Protection Agency, Office of Technology Transfer. Industrial Environmental Research Laboratory, Cincinnati, Ohio 45268. This publication is available from the Office of Technology Transfer.

"Fecal coliform" means the portion of the coliform group which is present in the gut or the feces of warm-blooded animals. It includes organisms which are capable of producing gas from lactose broth in a suitable culture medium within 24 hours at 44.5 plus or minus 0.2°C.

"FR" means the Federal Register, published, daily, by the Office of the Federal Register, National Archives and Record Service, General Services Administration, Washington, D.C. 20408 and distributed by the Superintendent of Documents, U. S. Government Printing Office, Washington, D.C. 20402.

"Industrial wastes" means any solid, liquid, or gaseous wastes or excess energy in the form of heat resulting from any process of industry, manufacturing, trade, or business, or from the development,

processing or recovery, except for agricultural crop raising, of any natural resources.

"Local public works department" means a city or county public works department, a board of trustees of a city utility organized pursuant to Chapter 388, Code of Iowa, or a sanitary sewer district organized pursuant to Chapter 358, Code of Iowa.

"Low permeability" means a soil layer of well sorted, fine grain-sized sediments or of rock that under normal hydrostatic pressures would not be significantly permeable. Low permeability soils may include homogeneous clays below the zone of weathering mudstone, claystone, shale, and some glacial till.

"Major contributing industry" means an industrial user of a treatment works that:

- a. Has a flow of 50,000 gallons or more per average work day;
- b. Has a flow greater than five percent of the flow carried by the treatment works receiving the waste;
- c. Has in its waste a toxic pollutant in toxic amount as defined in standards issued under section 307(a) of the Act and adopted by reference in 17.5(455B); or
- d. Is found by the department in connection with the issuance of an NPDES permit to have a significant impact, either singly or in combination with other contributing industries, on that treatment works or upon the quality of effluent from that treatment works.

"Milligrams per liter (mg/l)" means milligrams of solute per liter of solution (equivalent to parts per million - assuming unit density). A microgram (ug) is 1/1000 of a milligram.

"Navigable water" means a water of the United States.

"Nephelometric" means the nephelometric method of determining turbidity as stated in Standard Methods, pp. 132-134.

"Nonpoint source" means a source of pollutants that is not a point source.

"NPDES permit" means an operation permit, issued after the department has obtained approval of its NPDES program from the administrator, that authorizes the discharge of any pollutant into a navigable water.

"Pathogen" means any micro-organism or virus that can cause disease.

"pH" means the hydrogen ion activity of a solution expressed as the logarithm of the reciprocal of the hydrogen ion activity in moles per liter at 25°C. pH is a measure of the relative acidity or alkalinity of the solution. The range extends from 0 to 14; 7 being neutral, 0 to 7 being acidic, and 7 to 14 being alkaline.

"Point source" means any discernible, confined, and discrete conveyance, including, but not limited to, any pipe, ditch, channel, tunnel, conduit, well, discrete fissure, container, rolling stock, concentrated animal feeding operation, or vessel or other floating craft, from which pollutants are or may be discharged.

"Primary contact" means any recreational or other water use in which there is prolonged and intimate contact with the water involving considerable risk of ingesting water in quantities sufficient to pose significant health hazard, such as swimming and waterskiing.

"Records of operation" means department of environmental quality report forms or such other report forms, letter or documents which may be acceptable to the department that are designed to indicate specific physical, chemical or biological values for waste water during a stated period of time.

"Regional administrator" means the regional administrator of the United States Environmental Protection Agency, Region VII, 1735 Baltimore, Kansas City, Missouri 64108.

"Secondary contact" means any recreational or other water use in which contact with the water is either incidental or accidental and in which the probability of ingesting appreciable quantities of water is minimal, such as fishing, commercial and recreational boating and any limited contact incidental to shoreline activity.

"Shallow well" means a well located and constructed in such a manner that there is not a continuous five foot layer of low permeability soil or rock between the aquifer from which the water supply is drawn and a point 25 feet below the normal ground surface.

"Standard methods" means "Standard Methods for the Examination of Water and Waste Water", 14th Edition,

1975. This publication is available from the American Public Health Association, 1015 18th Street, N.W., Washington, D.C. 20036.

"Temperature" means a measure of the heat content of water.

"Turbidity" is a measure of the optical property of the particles of mud, clay, silt, finely divided organic matter, or microscopic organisms suspended in water that interfere with light transmission, causing the light to be scattered and absorbed rather than transmitted through the water in straight lines.

Kansas¹⁶

(b) Definitions. For use in these regulations, the following definitions shall be applicable, unless the context obviously dictates otherwise:

(1) "Acute toxicity level" means 0.3 times the concentration of a substance that kills 50 percent of a test species in a short-term aquatic toxicity test (less than or equal to 96 hours).

(2) "Alluvial aquifer" means the sediment that is associated with and deposited by a stream, and that contains water capable of being produced from a well.

(3) "Artificial sources" means sources of pollution that result from human activities which can be abated by construction of control structures, modification of operating practices, complete restraint of activities, or some combination of these methods.

(4) "Base flow" means that portion of the stream flow that is not contributed to the stream by surface runoff.

(5) "Bioaccumulation" means the accumulation of toxic substances in plant or animal tissue through either bioconcentration or biomagnification.

(6) "Bioassessment methods and procedures" means the use of biological including, but not limited to, field methods of assessing water quality investigations of aquatic organisms and laboratory or field aquatic toxicity tests.

(7) "Bioconcentration" means the concentration and incorporation of toxic chemicals or materials into body tissues from ambient sources.

(8) "Biomagnification" means the concentration of toxic materials through the food chain through

successive cycles of eating and being eaten and subsequent accumulation of such materials in high order consumers and predators.

(9) "Biota" means indigenous species of aquatic or semi-aquatic life or wildlife.

(10) "Carcinogenic" means having the property of inducing the production of cancerous cells in organisms.

(11) "Clean Water Act" means the federal water pollution control act, P.L. 95-217, 33 USC section 1251 (1977), as amended.

(12) "Department" means the Kansas department of health and environment.

(13) "Detection limits" means the lowest concentration of a substance that can be determined by a given analytical methodology.

(14) "Discharge" means the release of effluent, either directly or indirectly, into surface waters.

(15) "Dissolved oxygen" (DO) means the oxygen dissolved in water.

(16) "Ecological integrity" means the normal or expected structure and function of the interacting system of a biological community and its physical-chemical environment.

(17) "Effluent" means the sewage or wastewater discharged from an artificial source.

(18) "Epilimnion" means that region of a body of water that extends from the surface to the thermocline and that does not have a permanent temperature stratification. The thermocline is the layer in a body of water where the temperature difference is the greatest per unit of depth. It is the layer in which the drop in temperature equals or exceeds 1°C per meter.

(19) "FDA action levels" means federal food and drug administration (FDA) limits for poisonous or deleterious substances in human food and animal feed which are the maximum allowable concentrations in edible portions of fish or other aquatic life as cited in "Action Levels for Poisonous or deleterious Substances in Human Food and Animal Feed" (1982)

(20) "Fecal coliform bacteria" means facultative anaerobic, gram negative, non-spore forming, rod-shaped bacteria which, when contained in specific media designated for the purpose, will ferment lactose, thereby producing acid, gas, or both. This fermentation of lactose occurs within a 24-hour incubation period, plus or minus 2-hours, at 44.5°C plus or minus 0.2°C.

(21) "Flow" means the volume of water moving past a given point per unit of time.

(22) "Groundwater" means water located under the surface of the land that is or can be the source of supply for wells, springs, or seeps, or that is held in aquifers or the soil profile.

(23) "Interstate waters" means all waters of the state which cross or form a part of the border between Kansas and one of the adjoining states.

(24) "Intrastate waters" means all waters of the state that do not flow or extend across a state line or form a boundary between Kansas and an adjacent state.

(25) "Mixing Zone" means that designated portion of a stream where an effluent is incompletely mixed with the receiving surface water.

(26) "Mg/l" means the abbreviation for milligrams per liter which is equivalent to "parts per million (ppm)."

(27) "Mutagenic" means the property of directly or indirectly causing a mutation.

(28) "Nonpoint source" means a diffuse source of water pollution including, but not limited to, runoff from agriculture, mining, construction activity, saltwater intrusion, deposition of residual waste and disposal of pollutants on land or in subsurface excavations.

(29) "pH" means the logarithm of the reciprocal of the hydrogen ion concentration. pH is measured on a scale between 0 and 14 with values less than 7 being more acidic and values greater than 7 being more alkaline.

(30) "Point source" means any discernible, confined, and discrete conveyance which is a source of pollution, including any pipe, ditch, channel, tunnel, conduit, well, discrete fissure, container, rolling stock, concentrated animal feeding operation, vessel, or other floating craft from which pollutants are or may be discharged. This term does not include return flows from irrigated agriculture.

(31) "Pollution" means:

(A) contamination or other alteration of the physical, chemical, or biological properties of surface waters that will or is likely to create a nuisance or render such waters harmful, detrimental, or injurious to public health, safety, or welfare, to plant, animal, or aquatic life or to other designated uses; or

(B) any discharge that will or is likely to exceed state effluent standards predicated upon technologically-based effluent limitations.

(32) "Potable water" means water that is suitable for drinking and cooking purposes in terms of both health and aesthetic considerations.

(33) "Surface runoff" means the water which flows over land into surface waters.

(34) "Surface water segment" means a delineated portion of a stream, river, riparian wetland, lake, or wetland

(35) "Surface waters" means all streams and rivers, including springs, water in alluvial aquifers available for flow to streams, and riparian wetlands, and all lakes and wetlands. When a fresh water reservoir, farm pond, or wetland is privately owned and when the land bordering this water is completely under private ownership, the fresh water reservoir, farm pond, or wetland shall be exempt from water quality standards except those relating to water discharge or seepage from this water to waters of the state, either surface or groundwater, or to the public health of persons using all reservoirs, ponds, or wetlands, or waters therefrom.

(36) "Teratogenic" means having the property of causing abnormalities that originate from impairment of an event that is typical in embryonic or fetal development.

(37) "Toxic substance" means a substance that produces deleterious effects in humans, animals, or plants.

(38) "Turbidity" is a measure of the cloudiness of water and is expressed in standard units of turbidity based on the nephelometric method (NTU).

(39) "Un-ionized ammonia" means the dissolved, un-ionized, toxic portion of total ammonia.

Kentucky¹⁷

(40) "Water quality limited water" means any surface water in which the application of technology-based pollution control practices does not result in achievement of water quality standards.

(41) "Zone of passage" means the area bordering a mixing zone which allows for unobstructed upstream and downstream movement of aquatic organisms.

Section 1. Definitions and Abbreviations.

(1) General function of definitions. The following definitions describe terms used in this chapter. Terms not defined below shall have the meaning given to them in relevant statutes or, if not defined in statutes, the meaning attributed by common use.

(a) "Aquifer" means any formation of soil, sand, rock, gravel, limestone, sandstone, or other material or any fracture, crevice, or void in any space formation from which underground water is or may be available.

(b) "Coldwater aquatic habitat" means surface waters and associated substrate that will support indigenous aquatic life as well as stocked trout.

(c) "Conventional domestic water supply treatment" means or includes coagulation, sedimentation, filtration, and chlorination.

(d) "Criteria" mean specific concentrations of water constituents which, if not exceeded, are expected to result in an aquatic ecosystem suitable for designated uses of water(s). Such criteria are derived to protect legitimate uses such as aquatic life, domestic water supply, and recreational use.

(e) "Division" means the Division of Water Quality.

(f) "Effluent ditch" means that portion of a treatment system which is a discreet, person-made conveyance, either totally owned, leased or under proper easement by the discharger, which transports a discharge to waters of the Commonwealth.

(g) "Epilimnion" means the thermally homogeneous water layer overlying the metalimnion (thermocline) of a lake.

(h) "Eutrophication" means the enrichment of waters of the State by the discharge or addition of nutrients.

(i) "Fecal coliform" means the portion of the coliform group which is present in the gut or the feces of

warm-blooded animals. It generally includes organisms which are capable of producing gas from lactose broth in a suitable culture medium within twenty-four (24) hours at 44.5 degrees plus or minus 0.2 degrees C.

(j) "Hypolimnion" means the lower cold region of a stratified body of water that extends from the metalimnion to the bottom of the lake and circulation is restricted while stratified with the upper waters thereby receiving no oxygen from the atmosphere.

(k) "Indigenous aquatic life" means naturally occurring aquatic organisms including, but not limited to, bacteria, fungi, algae, aquatic insects, other aquatic invertebrates, reptiles and amphibians, and fishes. Under some natural conditions one (1) or more of the above groups may be absent from any given surface water.

(l) "Intermittent stream" means a stream that flows at certain times of the year as when it receives water from springs or precipitation in the immediate watershed.

(m) "LC₅₀" is used to express the results of bioassays having lethality as the criterion of toxicity. A numerical percentage is used to indicate the percentage of the test animals killed at a given concentration.

(n) "Low flow (seven (7) day, once-in-ten (10) year low flow" means that minimum average flow which occurs for seven (7) consecutive days with a recurrence interval of ten (10) years.

(o) "Low flow stream" means that portion of a watercourse where the low flow (not attributable to discharges and other hydraulic alterations) is one (1) cubic foot per second or less.

(p) "Median tolerance limit (TLM)" is a measure of the concentration at which fifty (50) percent of the organisms survive.

(q) "Milligrams per liter (mg/l)" means the milligram of substance per liter of solution, and is equivalent to parts per million in water assuming unit density.

(r) "Mixing zone" means a domain of a water body contiguous to a treated or untreated wastewater discharge of quality characteristics different from those of the receiving water. The discharge is in

transit and progressively diluted from the source to the receiving system. The mixing zone is the domain where wastewater and receiving water mix.

(s) "Natural temperature" means the temperature that would exist in waters of the Commonwealth without the change of enthalpy of artificial origin as opposed to climatic change or naturally occurring seasonally variable temperature associated with riparian vegetation and seasonal changes.

(t) "Natural water quality" means those naturally occurring physical, chemical, and biological properties of waters.

(u) "Non point" means any source of pollutants not defined by point source as used in this regulation.

(v) "Outstanding resource waters" means waters designated by the department pursuant to 401 KAR 5:031, Section 8.

(v) "Point source" means any discernible, confined, and discrete conveyance, including, but not limited to any pipe, ditch, channel, tunnel, conduit, well, discrete fissure, container, rolling stock, concentrated animal feeding operation, from which pollutants are or may be discharged. This term does not include return flows from irrigated agriculture.

(x) "Productive aquatic communities" means an assemblage of indigenous aquatic life capable of reproduction and growth.

(y) "Propagation" means the continuance of species by successful spawning, hatching, and development or natural generation in the natural environment, as opposed to the maintenance of species by artificial culture and stocking.

(z) "Public water supply" means only surface water that with conventional treatment will be suitable for human consumption, culinary purposes, or in any food or beverage processing industry and meet state and/or federal regulations for drinking water. This term is synonymous with "domestic water supply."

(aa) "Standard" is a numerical value, range of values, or narrative statement promulgated by the department to maintain and protect the waters of the Commonwealth for designated uses.

(bb) "Surface waters" means those waters having well defined banks and beds, either constantly or

intermittently flowing, except effluent ditches; impounded waters; and any subterranean waters flowing in well defined channels and having a clear hydrologic connection with the surface.

(cc) "Thermocline" means the plane in a body of water in which the maximum rate of decrease in temperature occurs.

(dd) "Toxic substances" means substances which are bioaccumulative, synergistic, antagonistic, teratogenic, mutagenic, and interfere with the normal propagation of aquatic life, wildlife, or preclude the legitimate uses of any waters of the Commonwealth.

(ee) "Warmwater aquatic habitat" means any surface water and associated substrate capable of supporting indigenous warmwater aquatic life.

(2) Abbreviations used in water quality regulations:

(a) °C means degree(s) Celsius;

(b) EPA - See U. S. EPA;

(c) °F means degree(s) Fahrenheit;

(d) mg/l means milligrams per liter (same as ppm);

(e) NPDES means National Pollutant Discharge Elimination System;

(f) pCi/l means picocuries per liter;

(g) ppm means part(s) per million (assuming unit density, same as mg/l);

(h) ug/l means micrograms per liter;

(i) U. S. EPA means the United States Environmental Protection Agency.

Louisiana¹⁸

"Administrative Authority" means the Secretary of the Department of Environmental Quality or his/her designated representative, the Assistant Secretary, Office of Water Resources.

"Artificial heat" means heat that is derived from unnatural sources such as power plant and other industrial cooling processes.

"Designated water use" means a use of the waters of the State as established by the Water Quality Standards. These include but are not limited to,

recreation, propagation of fish and other aquatic life and wildlife including shellfish, public water supply, agricultural activities, and outstanding natural resource waters.

"Dissolved oxygen" means the amount of oxygen dissolved in water, commonly expressed as a concentration in terms of milligrams per liter, mg/L.

"Dystrophic waters" means waters which are stained with organic material and which are low in dissolved oxygen due to natural conditions.

"Effluent" means wastewater discharged to the waters of the State.

"Effluent limitation" means any applicable state or federal quality or quantity limitation, which imposes any restriction or prohibition on quantities, discharge rates, and concentrations of pollutants which are discharged into the waters of the State.

"Fecal coliform" means a gram negative, non-spore forming, rod-shaped bacteria found in the intestinal tract of warm-blooded animals.

"Fresh warmwater fish" means those fish species whose populations reproduce in relatively warm water (above 20°C, 68°F) and low salinity (less than 2 ppt), including but not limited to, black basses, and freshwater sunfish and catfish.

"LC50" means the numerical limit or concentration of a test material which is lethal to fifty percent (50%) of exposed aquatic organisms in a specified period of time.

"mg/L" means milligrams per liter; it is essentially equivalent to parts per million in dilute aqueous solutions.

"ng/L" means nanograms per liter; it is essentially equivalent to parts per trillion in dilute aqueous solutions.

"Nonpoint source" means a diffuse source of water pollution that does not discharge through a point source but instead flows freely across exposed natural or man-made surfaces such as agricultural or urban runoff and runoff from construction, mining or silviculture activities.

"Office" means the Office of Water Resources within the Department of Environmental Quality.

"Person" means any individual, municipality, public or private corporation, partnership, firm, the United States Government and any agent or subdivision thereof, or any other juridical person.

"Point source" means a discernible, confined, and discrete conveyance including but not limited to, any pipe, ditch, channel, tunnel, conduit, well, discrete fissure, container, rolling stock, concentrated animal feeding operation, vessel or other floating craft, from which pollutants are or may be discharged. This term does not include return flows from irrigated agriculture.

"Public water supply" means a surface or underground raw water source which, after conventional treatment, will provide safe, clear, potable, and aesthetically pleasing water for uses which include but are not limited to, human consumption, food processing and cooking, and as a liquid ingredient in foods and beverages.

"Receiving waters" means the waters of the State into which an effluent is, or may be discharged.

"7Q10 flow" means the minimum 7 consecutive day average stream flow with a recurrence interval of once every 10 years.

"Total dissolved solids" (TDS) means the amount of solid material dissolved in water, commonly expressed as a concentration in terms of mg/L.

"Toxic substances" means any element, compound, or mixture which at sufficient exposure levels induces deleterious, acute or chronic physiological effects on an organism.

"µg/L" means micrograms per liter; it is essentially equivalent to parts per billion in dilute aqueous solutions.

"Wastewater" means liquid waste resulting from commercial, municipal, private or industrial processes. This includes but is not limited to, cooling and condensing waters, sanitary sewage, industrial waste and contaminated rainwater runoff.

"Water Pollution" means the introduction into the waters of the State by any means, including dredge and fill operations, of any substance in concentration which tends to degrade the chemical, physical, biological, or radiological integrity of such waters,

including, but not limited to, the discharge of brine from salt domes which are located on the coastline of Louisiana and the Gulf of Mexico into any waters off said coastline and extending therefrom three miles into the Gulf of Mexico.

"Water Quality Standard" means a definite numerical criterion value or general criterion statement, or policy statement promulgated by the Administrative Authority to enhance or maintain water quality and to provide for, and fully protect, a designated use of the waters of the State.

"Waters of the State" means both the surface and underground waters within the State of Louisiana including all rivers, streams, lakes, groundwaters, and all other watercourses and waters within the confines of the State, and all bordering waters of the Gulf of Mexico.

Maine¹⁹

1. Discharge. "Discharge" means any spilling, leaking, pumping, pouring emptying, dumping, disposing or other addition of any pollutant to waters of the State.

1-A. Coastal streams. "Coastal streams" means those waters of the State which drain directly or indirectly into tidal waters except portions of streams subject to the rise and fall of the tide and those waters listed and classified in sections 368 and 370.

2. Fresh surface waters. "Fresh surface waters" means all waters of the State other than tidal waters.

3. Municipality. "Municipality" means a city, town, plantation or unorganized township.

4. Person. "Person" means an individual, firm, corporation, municipality, quasi-municipal cooperation, state agency, federal agency or other legal entity.

4-A. Pollutant. "Pollutant" means dredged spoil, solid waste, junk, incinerator residue, sewage refuse, effluent, garbage, sewage sludge, munitions, chemicals, biological or radiological materials, oil, petroleum products or byproducts, heat, wrecked or discarded equipment, rock, sand, dirt and industrial, municipal, domestic, commercial or agricultural wastes of any kind.

4-B. Surface waste water disposal system. "Surface waste water disposal system" shall mean any system for

disposal of waste waters on the surface of the earth, including, but not limited to, holding ponds, surface application and injection systems.

5. Tidal waters. "Tidal waters" means those portions of the Atlantic Ocean within the jurisdiction of the State, and all other waters of the State subject to the rise and fall of the tide except those waters listed and classified in sections 368 and 369.

6. Transfer of ownership. "Transfer of ownership" means a sale, a lease, a sale of over 50 percent of the stock of a corporation to one legal entity or a merger or consolidation where the surviving corporation is other than the original licensee.

7. Waters of the State. "Waters of the State" means any and all the surface and subsurface waters which are contained within, flow through, or under or border upon this State or any portion thereof, including the marginal and high seas, except those waters as are confined and retained completely upon the property of one person and do not drain into or connect with any other waters of the State.

Maryland²⁰

A. General

(1) The following definitions describe the meaning of terms used in the water quality and the water pollution control regulations of the Department of Health and Mental Hygiene (Regulations .01 - .09, and .11, - .14).

(2) The terms "discharge", "discharge permit", "disposal system", "effluent limitation", "industrial user", "national pollutant discharge elimination system", "person", "pollutant", "pollution", "publicly owned treatment works", and "waters of this State", are defined in the Health-Environmental Article, SS1-101, 9-101, and 9-301, Annotated Code of Maryland. The definitions for these terms are provided below as a convenience, but persons affected by the Department's water quality and water pollution control regulations should be aware that these definitions are subject to amendment by the General Assembly.

B. Definition of Terms

(1) "Administrative order" means written notification issued by the Department under State law and

- regulations, and requiring correction of a water pollution condition or compliance with provisions of pertinent law and regulations.
- (2) "Advanced waste treatment" means treatment of wastes or wastewaters to:
- (a) Reduce the level of specific constituents which are not sufficiently controlled by best practicable control technology currently available (BPCTCA) or by secondary treatment; or
 - (b) Reduce organic oxygen demand beyond the level attainable by BPCTCA or secondary treatment to comply with waste load allocations in water quality limited waters.
- (3) "Affiliate" means an individual or corporation who is controlling, controlled by, or under common control of the applicant.
- (4) "Aquifer" means any formation of soil, sand, rock, gravel, limestone, sandstone, or other material, or any crevice from which underground water is or may be produced.
- (5) "Base flow" means the discharge entering stream channels from ground water or other delayed sources; that is, stream flow periods not affected by recent rainfall.
- (6) "Best practicable control technology currently available (BPCTCA)" means a feasible process which represents good engineering practice at reasonable cost at the time the discharge permit is issued or reissued. Feasibility is demonstrated by general use, demonstration process or pilot plants. For industrial waste discharges, BPCTCA is the same as Best Practicable Technology (BPT). For discharges from all sewage treatment facilities, BPCTCA means the secondary treatment levels specified by the Department in discharge permits.
- (7) "Biocide residual" means the level remaining in an effluent of a chemical substance added as part of the treatment process for the purpose of controlling bacteria, fungi, algae, or other microorganisms. This term includes chlorine and ozone.

- (8) "Coliform organisms" means the possession of the power to direct or cause the direction of the management policies of a person.
- (9) "Control" means the possession of the power to direct or cause the direction of the management policies of a person.
- (10) "Criteria" means numerical or descriptive limits for water constituents which are designed to protect designated uses of the waters of this State.
- (11) "Department" means the Department of Health and Mental Hygiene.
- (12) "Design stream flow" means the minimum 7 consecutive day average stream discharge having a recurrence interval of 10 years.
- (13) "Discharge" means:
 - (a) The addition, introduction, leaking, spilling, or emitting of a pollutant to waters of this State; or
 - (b) The placing of a pollutant in a location where the pollutant is likely to pollute.
- (14) "Discharge permit" means a permit issued by the Department of Health and Mental Hygiene for the discharge of any pollutant or combination of pollutants into the waters of this State.
- (15) "Disposal system" means a system for disposing of wastes by surface, above surface, or underground methods. Disposal system includes works and a disposal well.
- (16) "Effluent" means the outflow of treated or untreated waste from an industrial process, holding tank, pond, sewer, or other point source into the waters of this State.
- (17) "Effluent limitation" means any restriction or prohibition that:
 - (a) Is established under federal law or a law of this State;
 - (b) Specifies quantities, rates or concentrations of chemical, physical, biological, and other constituents that are being discharged into the waters of this State;

(c) Includes:

- (i) Parameters for toxic and non-toxic discharges,
 - (ii) Standards of performance for new sources, and
 - (iii) Ocean discharge standards.
- (18) "Effluent limited waters" means waters of this State which the Department has identified as those in which best practicable control technology currently available for industrial discharges and secondary treatment for sewage discharges is sufficiently stringent to maintain applicable water quality standards.
- (19) "Emergency conditions" means those circumstances resulting from a permittee's actions, or lack of actions, which the Department of Health and Mental Hygiene determines constitute a present or imminent danger to the public health, welfare, or the environment.
- (20) "EPA" means the United States Environmental Protection Agency, or its successor.
- (21) "Estuary" means a semi-enclosed coastal body of water having a free connection with the open sea and within which the seawater is measurably diluted with fresh water deriving from land drainage.
- (22) "Eutrophication or eutrophic" means:
- (a) The excessive enrichment of the waters of this State by the discharge to or addition of nutrients; or
 - (b) The degradation of water quality or undesirable ecological changes as indicated by excessive rooted or dispersed plant growth, loss of water clarity, or nuisance conditions.
- (23) "Fecal coliform" means the portion of the coliform bacteria group which is present in the gut or the feces of warm-blooded animals. It generally includes organisms which are capable of producing gas from lactose broth in a suitable culture medium within 24 hours at $44.5^{\circ} \pm 0.5^{\circ}\text{C}$.

- (24) "Federal Act" means the Federal Water Pollution Control Act, its amendments, and all regulations and rules adopted under the Act.
- (25) "Fish" means any of numerous cold-blooded aquatic vertebrates of the Superclass Pisces, characteristically having fins, gills, and a streamlined body. Fish includes:
- (a) Any of the Class Osteichthyes having a bony skeleton;
 - (b) Any of the Class Chondrichthyes, having a cartilaginous skeleton (sharks, rays and skates); and
 - (c) Any of the Class Agnatha which lack jaws (lampreys and hagfishes).
- (26) "General permit" is a discharge permit issued to a class of dischargers.
- (27) "Ground water" means underground water or water below the surface of the ground in a zone of saturation.
- (28) "Includes or including" means includes or including by way of illustration and not by way of limitation.
- (29) "Industrial user" means:
- (a) A person who is engaged in manufacturing, fabricating, or assembling goods; or
 - (b) A member of any class of significant producers of pollutants identified under regulations adopted by:
 - (i) The Department; or
 - (ii) The administrator of the United States Environmental Protection Agency.
- (30) "Industrial waste" means any liquid, gaseous, solid or other waste substance, or combination thereof, resulting from:
- (a) Any process of industry, manufacturing, trade or business; or
 - (b) The development of any natural resource, including agriculture

(30-1) "Interference" means:

(a) An inhibition or disruption of the POTW, its treatment processes or operations, or its sludge processes, use or disposal which causes either a violation of any requirement of the POTW's discharge permit or prevents sewage sludge use or disposal by the POTW in accordance with the following statutory provisions and regulations or permits issued under them:

(i) Section 405 of the Clean Water Act;

(ii) The Solid Waste Disposal Act (SWDA) (including Title II more commonly referred to as the Resource Conservation and Recovery Act (RCRA) and any State regulations contained in any State sludge management plan prepared pursuant to Subtitle D of the SWDA);

(iii) The Clean Water Act; and

(iv) The Toxic Substances Control Act.

(b) Damage to sewer systems and threats to POTW worker and public health, safety and comfort.

(31) "Intermittent stream" means a nontidal body of flowing water for which the computed design stream flow is zero.

(32) "Material balance" means an inventory accounting system for determining quantities of materials on hand, used in process, converted to product, lost to the environment, or contained in waste matter generated, stored, discharged, or otherwise processed.

(33) "Mixing zone" means an area contiguous to a discharge where surface water quality or ground water quality does not have to meet:

(a) All water quality criteria; or

(b) All requirements otherwise applicable to the natural water.

(34) "National Pollutant Discharge Elimination System (NPDES)" means the national system for issuing permits as designated by the Federal Act.

- (34-1) "National pretreatment requirements" means any general pretreatment regulation established by EPA in accordance with the Federal Act.
- (34-2) "National pretreatment standard" means a pollutant discharge limit contained in a regulation which:
- (a) Applies to industrial users of publicly owned treatment works; and
 - (b) Is promulgated by EPA under the Federal Act.
- (35) "NPDES application" means the current revised Environmental Protection Agency standard national forms for applying for an NPDES permit.
- (36) "NPDES permit" means the permit issued under the Federal Act.
- (37) "Natural" or "naturally occurring", when used to describe water quality, means:
- (a) Those water quality values which exist unaffected by, or unaffected as a consequence of, any water use;
 - (b) Those water quality values which exist unaffected by the discharge, or direct or indirect deposit of, any solid, liquid, or gaseous substance; or
 - (c) Any other water quality values which represent conditions which the Department by its regulations defines as natural. For the purposes of this definition, the following conditions shall be considered as natural:
 - (i) Infestations of water milfoil, Myriophyllum spicatum;
 - (ii) Infestations of water chestnut, Trapa natans;
 - (iii) The presence of sea lettuce, Ulva lactuca; and
 - (iv) The presence of sea nettles, Aurelia sp.
- (38) "Natural trout waters" means waters capable of supporting natural trout populations, including propagation, and their associated food organisms.

- (39) "New source" means any source, the construction of which is commenced after the publication of proposed regulations by the Environmental Protection Agency prescribing a standard of performance which will be applicable to the source if the standard is promulgated.
- (40) "Nontidal water" means water not subject to regular and periodic tidal action (generally freshwater).
- (41) "Oil" means any of a number of unctuous combustible substances which are liquid at ambient temperature and atmospheric pressure, or easily liquefiable on warming and soluble in ether, and which include fuel oil, gasoline, kerosene, lubricating oil, other petroleum products, oil bearing sludge, oil refuse, oil mixed with ballast or bilge water, and oil mixed with wastes.
- (42) "Operator" means that person or those persons with responsibility for the management and performance of each facility.
- (43) "Other aquatic life" means all organisms, other than fish, which grow in, live in, or frequent water.
- (44) "Other waste" means garbage, refuse, wood, sawdust, shavings, bark, sand, lime, cinders, ashes, offal, oil, tar, dyestuffs, acids, chemicals, and all discarded substances other than sewage or industrial waste.
- (44-1) "Pass through" means discharge of pollutants through the POTW into waters of the State in quantities or concentrations which cause a violation of any requirement of the POTW's discharge permit.
- (45) "Permeability of an aquifer" means the volume of water at the prevailing kinematic viscosity that will move in unit time under a unit hydraulic gradient through a unit area measured at right angle to the direction of flow.
- (46) "Permit" means written authorization issued by the Department of Health and Mental Hygiene under pertinent law and regulations and describing required performance for specific activities and operations.

- (47) "Permittee" means the person holding a permit issued by the Department of Health and Mental Hygiene.
- (48) "Person" means any individual, receiver, trustee, guardian, personal representative, fiduciary, or representative of any kind, and any partnership, association, corporation or other entity. Person includes the federal government, this State, any county, municipal corporation, or other political subdivision of this State or any of their units.
- (49) "Person in charge" means the person designated by an operator or permittee as the one with direct supervisory responsibility for an activity or operation at a facility.
- (50) "Point of discharge" means any discernible, confined and discrete conveyance, including any pipe, ditch, channel, tunnel, conduit, well, discrete fissure, container, rolling stock, concentrated animal feeding operation, or vessel or other floating craft, from which pollutants are, or may be discharged.
- (52) "Pollutant" means:
- (a) Any waste or wastewater that is discharged from:
 - (i) Any publicly owned treatment works;
 - (ii) An industrial source; or
 - (b) Any other liquid, gaseous, solid, or other substances which will pollute any waters of this State.
- (53) "Pollution" means any contamination or other alteration of the physical, chemical, or biological properties of any waters of this State, including a change in temperature, taste, color, turbidity, or odor of the waters or the discharge or deposit of any organic matter, harmful organism, or liquid, gaseous, solid, radioactive, or other harmful, or detrimental, to:
- (a) Public health, safety, or welfare;
 - (b) Domestic, commercial, industrial, agricultural, recreational, or other legitimate beneficial uses;

- (c) Livestock, wild animals, birds; or
 - (d) Fish or other aquatic life.
- (53-1) "Pretreatment" means a reduction in the amount of pollutants, the elimination of pollutants, or the alteration of the nature of pollutant properties in a wastewater before discharging to or otherwise introducing pollutants into a POTW.
- (53-2) "Pretreatment requirements" means any:
- (a) National pretreatment requirements and national pretreatment standards;
 - (b) Pretreatment regulations developed in accordance with Health-Environmental Article 59-319(a), Annotated Code of Maryland;
 - (c) Pretreatment requirements listed within the delegation document issued by the Department approving a pretreatment program developed by owners of a POTW;
 - (d) Pretreatment requirements developed by owners of POTWs in accordance with approved pretreatment programs; or
 - (e) Pretreatment requirements established in a permit or agreement between a POTW and an industrial user issued in accordance with an approved pretreatment program.
- (54) "Propagation" means the continuance of species by generation of successive production in the natural environment, as opposed to the maintenance of species by artificial culture and stocking.
- (55) "Publicly owned treatment works (POTW)" means a facility that is:
- (a) Owned by this State or a political subdivision, municipal corporation, or other public entity; and
 - (b) Used for the treatment of pollutants.
- (56) "Receiving water" means the surface waters of this State into which wastes or wastewaters are or may be discharged.

- (57) "Recreational trout waters" means cold or warm waters capable of holding or supporting adult trout for put-and-take fishing, usually seasonal.
- (58) "Refuse Act" means S13 of the River and Harbor Act of March 3, 1899.
- (59) "Refuse Act application" means the application for a permit under the Refuse Act.
- (60) "Refuse Act permit" means any permit issued under the Refuse Act.
- (61) "Regular or periodic tidal action" means the rise and fall of the sea produced by the gravitational attraction of the sun and moon unaffected by wind or any other circumstances.
- (62) "Schedule of compliance" means a schedule of remedial measures including an enforceable sequence of actions or operations leading to compliance with effluent limitations or water quality standards as specified by an order or permit requirement of the Department.
- (63) "Secondary treatment" means the treatment of sewage to produce effluent equal to or better than the following quality:
- (a) Five day biochemical oxygen demand:
 - (i) 30 mg/l - average for a 30 day period;
 - (ii) 45 mg/l - average for a 7 day period.
 - (b) Total suspended solids:
 - (i) 30 mg/l - average for a 30 day period;
 - (ii) 45 mg/l - average for a 7 day period.
 - (c) Bacterial control: As required to meet water quality standards.
- (64) "Sewage" means the water-carried domestic waste from residences, buildings, industrial establishments, or other places.
- (65) "Shellfish harvesting waters" means waters that are actual or potential areas for the harvesting of shellfish including oysters, softshell clams, and brackish water clams.

- (66) "Sludge" means the settleable solids that are:
- (a) Naturally present in waters and wastewaters; or
 - (b) Derived from nonsettleable matter by chemical coagulation and precipitation or by biological flocculation and precipitation.
- (67) "Source" means any building, structure, facility, or installation from which there is, or may be, a discharge of pollutants.
- (68) "Spill (spilling)" means any loss of control or release of oil or other hazardous substance that moves or is capable of moving into the aquatic environment.
- (69) "Standard of performance" means a standard for the control of the discharge of pollutants which reflects the greatest degree of effluent reduction achievable through application of the best available demonstrated control technology, processes, operating methods, or other alternatives as established by the State or the Environmental Protection Agency.
- (70) "State" means the State of Maryland.
- (71) "Stream flow" means the nontidal water movement that occurs in a natural channel.
- (72) "Sub-basin" means one of the 20 watershed areas delineated by the Maryland Department of Health and Mental Hygiene, and comprising, in sum total, the surface waters of the State.
- (73) "Surface waters" means all waters of this State which are not groundwaters.
- (74) "Thermal barrier" means a pattern of artificially created temperature change and distribution.
- (75) "Tidal water" means water subject to regular or periodic tidal action.
- (76) "Toxic materials" means any liquid, gaseous, or solid substance or substances in a concentration which, when applied to, discharged to, or deposited in the waters of the State, may exert a poisonous effect detrimental to man or to the propagation, cultivation or conservation of animals, fish, or other aquatic life.

- (77) "Transmissivity of an aquifer" means the rate which water of the prevailing kinematic viscosity is transmitted through a unit width of the aquifer under a unit hydraulic gradient.
- (78) "Treatment works" means any plant or other works used for the purpose of treating, or stabilizing, wastes.
- (79) "Vessel" means every watercraft or other artificial contrivance used, or capable of being used, as a means of transportation on the waters of this State.
- (80) "Waste load allocation" means the identification and allotment by the Department of Health and Mental Hygiene of quantities of residual wastes which may be discharged from point sources. This allotment shall include:
- (a) Limits on the quantities of wastes which may be discharged;
 - (b) Consideration of seasonal variations;
 - (c) A margin of safety; and
 - (d) The contribution of non-point sources.
- (81) "Waste" means industrial waste and all other liquid, gaseous, solid, or other substances which will pollute any waters of this State.
- (82) "Wastewater" means any:
- (a) Liquid waste substance derived from industrial, commercial, municipal, residential, agricultural, recreational, or other operations or establishments; and
 - (b) Other liquid waste substance containing liquid, gaseous, or solid matter and having characteristics which will pollute any waters of this State.
- (83) "Water" means the liquid substance which is derived from ground water source, or a surface source, or a piped supply, or any combination of these sources, which will be discharged, without change in quality, into the waters of this State, with the exception of storm water runoff.
- (84) "Water class unit" means a distinct portion of a sub-basin.

(85) "Water quality criteria" means numerical and descriptive limits designed to protect designated uses of the waters of this State by controlling concentrations of water constituents.

(86) "Water quality limited waters" means shellfish waters and other waters of this State for which best practicable control technology currently available for industrial discharges and secondary treatment for sewage discharges is not sufficiently stringent to maintain applicable water quality standards.

(87) "Watercourse" means a specific body or channel of water which is part of the waters of this State.

(88) "Waters of this State" includes:

(a) Both surface and underground waters within the boundaries of this State subject to its jurisdiction, including that part of the Atlantic Ocean within the boundaries of this State, the Chesapeake Bay and its tributaries, and all ponds, lakes, rivers, streams, public ditches, tax ditches, and public drainage systems within this State, other than those designed and used to collect, convey, or dispose of sanitary sewage; and

(b) The floodplain of free-flowing waters determined by the Department of Natural Resources on the basis of the 100-year flood frequency.

Massachusetts²¹

Artificial conditions - Those conditions resulting from human alteration of the chemical, physical or biological integrity of waters.

Beneficial use - Any use not impairing the most sensitive use designated in the classification tables contained in Part 5; except that in no case shall the assimilation or transport of pollutants be deemed a beneficial use.

Cold water fishery - Waters whose quality is capable of sustaining a year-round population of cold water trout (salmonidae).

Division - The Massachusetts Division of Water Pollution Control, as established by General Laws c 21, ss26.

Discharge - Any addition of any pollutant to the waters of the Commonwealth.

EPA - The United States Environmental Protection Agency

Federal Act - The Federal Water Pollution Control Act, as amended, 33 U.S.C. ss1251, et seq.

Massachusetts Act - The Massachusetts Clean Waters Act, as amended, General Laws, c 21 ss26-53, inclusive.

Pollutant - An element or property of sewage, agricultural, industrial or commercial waste, runoff, leachate, heated effluent, or other matter, in whatever form and whether originating at a point or major nonpoint source, which is or may be discharged, drained or otherwise introduced into any sewerage system, treatment works or waters of the Commonwealth.

Primary contact recreation - Any recreation or other water use, such as swimming and water skiing, in which there is prolonged and intimate contact with the water sufficient to constitute a health hazard.

Seasonal cold water fishery - Waters whose quality is capable of sustaining only an extremely limited cold water population on a year-round basis, with cold-water fish in these streams provided largely by stocking.

Secondary contact recreation - Any recreation or other water use in which contact with the water is either incidental or accidental, such as fishing, boating and limited contact incident to shoreline activities.

Segment - A finite portion of a water body established by the Division for the purpose of classification.

Warm water fishery - Waters whose quality is not capable of sustaining a year-round cold water or seasonal cold water fishery.

Waters of the Commonwealth - All waters within the jurisdiction of the Commonwealth, including, without limitation, rivers, streams, lakes, ponds, springs, impoundments, estuaries and coastal waters, but not including groundwaters.

Michigan²²

R323.1043. Definitions A to N.

Rule 1043. As used in this part.

(a) "agricultural water use" means a use of water for agricultural purposes, including, but not limited to,

livestock watering, irrigation and crop spraying.

(b) "Application factor" means a numerical factor applied to the TL_m or concentration producing other effect end points to provide the concentration of a toxic substance that would be safe for test organisms in the waters of the state.

(c) "Best practicable waste treatment technology for control of total phosphorous" means chemical-physical or chemical-physical-biological treatment processes, including but not limited to treatment with aluminum salts, iron salts, or lime in conjunction with appropriate coagulant chemicals, settling or filtration or both, with operation and management of the treatment facilities and the process to achieve optimum phosphorous removal rates, or equivalent treatment.

(d) "Anadromous salmonids" means those trout and salmon which ascend streams to spawn.

(e) "Coldwater fish" means those fish species whose populations thrive in relatively cold water, including but not limited to trout, salmon, whitefish and cisco.

(f) "Connecting waterways" means the St. Marys River, Keveenaw waterway, Detroit River, St. Clair River and Lake St. Clair.

(g) "Designated use" means a use of the waters of the state as established by these rules, including but not limited to industrial, agricultural and public water supply; recreation; fish, and other aquatic life and wildlife; and navigation.

(h) "Dissolved oxygen" means the amount of oxygen dissolved in water, commonly expressed as a concentration in terms of milligrams per liter.

(i) "Dissolved solids" means the amount of materials dissolved in water commonly expressed as a concentration in terms of milligrams per liter.

(j) "Effluent" means a wastewater discharged from a point source to the waters of the state.

(k) "Fecal coliform" means a type of coliform bacteria found in the intestinal tract of humans and other warm-blooded animals.

(l) "Fish, other aquatic life, and wildlife use" means the use of the waters of the state by fish, other

aquatic life and wildlife for any life history stage or activity.

(m) "Industrial water supply" means a water source not protected for public water supply and intended for use in commercial or industrial applications and no-contact food processing.

(n) "Mixing zone" means a region of a water body which receives a wastewater discharge of a different quality than the receiving waters, and within which the water quality standards as prescribed by these rules do not apply.

(o) "Natural water temperature" means the temperature of a body of water without an influence from an artificial source, or a temperature as otherwise determined by the Commission.

R 323.1044. Definitions P to W
Rule 1044. As used in this part.

(a) "Palatability" means the state of being agreeable or acceptable to the senses of sight, taste, or smell.

(b) "Plant nutrients" means those chemicals, including but not limited to nitrogen and phosphorus, necessary for the growth and reproduction of aquatic rooted, attached, and floating plants, fungi, or bacteria.

(c) "Point source" means a discernible, confined, and discrete conveyance from which wastewater is or may be discharged to the waters of the state, including but not limited to, a pipe, ditch, channel, tunnel, conduit, well, discrete fissure, container, concentrated animal feeding operation or vessel or other floating craft.

(d) "Public water supply" means a surface raw water source which, after conventional treatment, will provide a safe, clear, potable, and aesthetically pleasing water for uses which include, but are not limited to human consumption, food processing and cooking, and as a liquid ingredient in foods and beverages.

(e) "Raw water" means the waters of the state prior to any treatment.

(f) "Receiving waters" means the waters of the state into which an effluent is, or may be discharged.

(g) "Sanitary sewage" means treated or untreated wastewaters which contain human metabolic and domestic wastes.

(h) "Standard" means a definite numerical value or narrative statement promulgated by the commission to enhance or maintain water quality to provide for, and fully protect, a designated use of the waters of the state.

(i) "Suspended solids" means the amount of material suspended in water, commonly expressed as a concentration in terms of milligrams per liter.

(j) "TL_m" means median tolerance limit which is the concentration of a test material in a suitable diluent at which 50% of the exposed organisms survive for a specified period of exposure.

(k) "Total body contact recreation" means an activity where the human body may come into direct contact with water to the point of complete submergence, including, but not limited to, activities such as swimming, water skiing, and skin diving.

(l) "Toxic substances" means substances of unnatural origin, except heat, in concentrations or combinations which are or may become harmful to plant or animal life.

(m) "Warmwater fish" means those fish species whose populations thrive in relatively warm water, including but not limited to, bass, pike, walleye, and panfish.

(n) "Wastewater" means liquid waste resulting from commercial, municipal, and domestic operations and industrial processes, including, but not limited to, cooling and condensing waters, sanitary sewage, and industrial waste.

(o) "Waters of the state" means the Great Lakes, their connecting waterways, all inland lakes, rivers, streams, impoundments, open drains, and other surface watercourses within the confines of the state, except drainage ways and ponds used solely for wastewater conveyance, treatment, or control.

Minnesota²³

The terms "waters of the state" for the purposes of this regulation shall be construed to mean intrastate waters as herein below defined, and the terms "sewage," industrial waters," and "other wastes," as well as any other terms for which definitions are given in the Water Pollution Control Statues, as used herein have the meanings ascribed to them in Minnesota

Statutes, Sections 115.01 and 115.41, with the exception that disposal systems or treatment works operated under permit of the Agency shall not be construed to be "waters of the state" as the term is used herein. Interstate waters are defined as all rivers, lakes, and other waters that flow across or form part of state boundaries. All of the remaining designated waters of the state which do not meet the definition of interstate waters given above are to be construed herein as constituting intrastate waters. Other terms and abbreviations used herein which are not specifically defined in applicable federal or state law shall be construed in conformance with the context, and in relation to the applicable section of the statutes pertaining to the matter at hand, and current professional usage.

Mississippi²²

Not specified

Missouri²⁵

(A) Waters of the State: All rivers, streams, lakes and other bodies of surface and subsurface water lying within or forming a part of the boundaries of the state which are not entirely confined and located completely upon lands owned, leased or otherwise controlled by a single person or by two or more persons jointly or as tenants in common and includes water of the United States lying within the state.

(B) Stream-flow classification

1. Class P: Streams that maintain permanent flow even in drought periods.

2. Class P1: Standing-water reaches of Class P streams, including impoundments.

3. Class C: Streams that may cause flow in dry periods, but maintain permanent pools which support aquatic life.

(C) Water quality criteria: Chemical, physical, and biological properties of water that are necessary to protect beneficial water uses.

(D) Beneficial water uses:

1. Irrigation: Application of water to cropland or directly to plants that may be used for human or livestock consumption. Occasional supplemental irrigation, rather than continuous irrigations, is assumed.

2. Livestock watering and wildlife watering (LW, WW): Maintenance of conditions to support health in livestock and wildlife.

3. Protection of warm-water aquatic life: Maintenance of conditions to sustain warm-water fish and other warm-water aquatic life, including critical stages of reproduction and early life. It will include warm-water sport fishing.

4. Coldwater sport fishery (CWSF): Maintenance of conditions to support the propagation or stocking of trout.

5. Whole-body contact recreation (WBCR): Activities in which there is direct human contact with the raw surface water to the point of complete body submergence. The raw water may be ingested accidentally and certain sensitive body organs, such as the eyes, ears, and the nose, will be exposed to the water. Although the water may be ingested accidentally, it is not intended to be used as a potable supply unless acceptable treatment is applied. Water so designated is intended to be used for swimming, water skiing or skin diving.

6. Drinking water supply (DWS): Maintenance of a raw water supply which will yield potable water by common treatment processes.

7. Industrial process water and industrial cooling water: Water to support various industrial uses; since quality needs will vary by industry, no specific criteria are set in these standards.

8. Commercial Fishery: Aquatic life criteria and Food and Drug Administration limits for fish consumption are applicable.

9. Boating and canoeing: Activities in which very little contact with water is assumed.

(E) Outstanding national resource waters: Waters which have outstanding recreation and ecological significance. These waters shall receive special protection against any degradation in quality. Rivers of the Ozark National Scenic Riverways and the Wild and Scenic Rivers systems are so designated.

(F) Epilimnion: Zone of atmospheric mixing in a thermostratified lake.

(G) Hypolimnion: Zone beneath the zone of atmospheric mixing in a thermostratified lake.

(H) Aquifer: A subsurface water-bearing bed or stratum of sand, gravel or bedrock which stores or transmits water in recoverable quantities.

(I) Losing stream: A stream which distributes 30% or more of its flow through natural processes, such as through permeable subsoil and/or cavernous bedrock, into groundwater.

(J) Fecal coliform bacteria: A group of bacteria present in intestines of warm-blooded animals which indicates the possible presence of pathogenic organisms.

(K) Un-ionized ammonia: The toxic form of ammonia; higher pH and higher temperature will cause a larger percentage to exist in the un-ionized form.

(L) 96-Hour LC₅₀ (TLM): Concentration of a toxicant which would be expected to kill 50% of the individuals of the test species in 96 hours.

(M) Regulated-flow streams: A stream that derives a majority of its flow from a flow-regulating structure.

(N) Mixing zone: An area of initial dilution of effluent in the receiving water.

(O) Zone of passage: A continuous water route of the volume, area and quality necessary to allow passage of free-swimming and drifting organisms with no significant effects produced on their populations.

(P) 7-day, once-in-ten year low flow (7-day, Q10): The average minimum flow for seven consecutive days that has a recurrence interval of once in ten years.

Montana²⁶

Unless statutory definition or the context otherwise requires in this rule:

"Conduit" means any artificial or natural duct, either open or closed, for conveying liquids or other fluids.

"Dewatered stream" means a perennial or intermittent stream whose water has been removed for one or more beneficial uses.

"EPA" means the U. S. Environmental Protection Agency.

"Intermittent stream" means a stream or portion of a stream that flows only in direct response to precipitation; it receives little or no water from

springs and no long-continued supply from melting snow or other sources.

"Naturally occurring" means conditions or material present from runoff or percolation over which man has no control or from developed land where all reasonable land, soil and water conservation practices have been applied. Conditions resulting from dams in existence as of July 1, 1971 are natural.

"Mixing zone" means that volume of state water wherein any pollutant may exceed allowable water quality standards.

"Pesticide" means insecticides, herbicides, rodenticides, fungicides or any substance or mixture of substances intended for preventing, destroying, controlling, repelling, altering life processes, or mitigating any insects, rodents, nematodes, fungi, weeds and other forms of plant or animal life.

"Residue" means oils, floating solids and sludge deposits.

"Sediment" means solid material settled from suspension in a liquid; mineral or organic solid material that is being transported or has been moved from its site of origin by air, water or ice and has come to rest on the earth's surface, either above or below sea level; or inorganic or organic particles originating from weathering, chemical precipitation or biological activity.

"Settleable solids" means inorganic or organic particles that are being transported or have been transported by water from the site or sites of origin and are settled or are capable of being settled from suspension.

"Sewer" means a pipe or conduit that carries wastewater or drainage water.

"State waters" means any body of water, irrigation system or drainage system, either surface or underground. This section shall not apply to irrigation waters where the waters are used up within the irrigation system and said waters are not returned to any other state waters. The term "state waters" as used in this rule does not include underground waters.

"Storm sewer" or "storm drain" means a sewer that carries storm water and surface water, street wash and other wash waters, or drainage but excludes sewage and industrial wastes.

Nebraska²⁷

"True color" means the color of water from which the turbidity has been removed.

"Turbidity" means a condition in water or wastewater caused by the presence of suspended matter resulting in the scattering and absorption of light rays.

001 "Beneficial Use" shall mean one of the existing uses of a water body or one that is attainable based on the physical, chemical, or biological water body characteristics. Beneficial uses include but are not limited to agricultural, industrial, and public water supplies; protection and propagation of fish; and recreation in and on the water. Waste transport is not a beneficial use.

002 "Canal" shall mean an artificial waterway which acts as a main supply line of an irrigation canal system into which water is released from a reservoir or diverted from a river.

003 "Colloidal Substances" shall mean clay or other substances which do not settle out without the use of a flocculent.

004 "Cubic Foot per Second (cfs)" shall mean the unit of measurement used in reporting stream discharge, sometimes referred to as second-foot (sec-ft). It is a volume of one cubic foot passing a given point during one second of time and is equivalent to 7.48 gallons per second or 448.8 gallons per minute.

005 "Daily Mean" shall mean an average of the daily high and low measured values. In calculating the daily mean for dissolved oxygen, values used in the calculations shall not exceed the dissolved oxygen air saturation value. If a measured value exceeds the dissolved oxygen air saturation value, then the dissolved oxygen air saturation value shall be used in calculating the daily mean.

006 "Department" shall mean the Nebraska Department of Environmental Control.

007 "Dissolved Oxygen (DO)" shall mean a measure of the amount of free oxygen in the water.

008 "Dissolved Oxygen Air Saturation Value" shall mean the concentration of dissolved oxygen which represents 100 percent saturation at any given point in a water body based on the water temperature and atmospheric pressure.

009 "Early Life Stages" shall mean all embryonic and larval stages and all juvenile forms to 30 days following hatching.

010 "Endangered Species" shall mean any aquatic species identified by the Nebraska Game and Parks Commission whose continued existence as a viable component of the wild fauna of the State is determined to be in jeopardy or which meets the criteria of the Federal Endangered Species Act.

011 "Epilimnion" shall mean the warm, freely circulating upper layer of thermally stratified lakes.

012 "Existing Uses" shall mean those beneficial uses actually attained in a water body on or after November 28, 1975, whether or not they are included in these water quality standards.

013 "Fecal Coliform" shall mean the portion of the coliform group which is present in the gut or feces of warm-blooded animals and generally includes organisms which are capable of producing gas from lactose broth in a suitable culture medium within 24 hours at $44.5 \pm 0.5^{\circ}\text{C}$.

014 "Hypolimnion" shall mean the cold, relatively undisturbed lowermost layer of thermally stratified lakes.

015 "Impounded Waters" shall mean manmade or naturally occurring collections or confinements of water.

016 "Junk" shall mean old scrap, copper, brass, iron, steel, rope, rags, batteries, paper, trash, rubber debris, waste, dismantled or wrecked automobiles, or parts thereof, and other old or scrap ferrous or nonferrous material.

017 "Key Species" shall mean identified endangered, threatened, sensitive, or recreationally important aquatic species associated with a particular water body and its aquatic life use class.

018 "Lateral" shall mean the water conveyance portion of an irrigation system which has a smaller initial capacity than the canal and includes a ditch, conduit, pipe, or channel which extends in a direction away from the canal and provides direct irrigation service to farms.

019 "Metalimnion" shall mean the layer of a thermally stratified lake which exhibits a steep temperature

gradient and separates the epilimnion above from the hypolimnion below.

020 "Milligrams per Liter (mg/l)" shall mean the milligrams of substance per liter of solution, equivalent to parts per million assuming unit density of the solution.

021 "Mixing Zone" shall mean an area of a water body contiguous to a wastewater discharge. The mixing zone should be considered a place where wastewater and receiving water mix and not as a place where wastes are treated.

022 "Nonpoint Source" shall mean any source of pollutants other than those defined as point sources.

023 "One Day Minimum" shall mean the lowest daily instantaneous value measured.

024 "Petroleum Oils" shall mean all oils other than oils of vegetable and animal origin.

025 "pH" shall mean the negative logarithm of the hydrogen ion concentration ($\text{pH} = -\log [\text{H}^+]$). pH expresses both the acidity and alkalinity of water on a scale from 0 to 14, with 7 representing neutrality (numbers less than 7 denote increasing acidity, and numbers greater than 7 increasing alkalinity).

026 "Point Source" shall mean any discernible confined and discrete conveyance, including but not limited to any pipe, ditch, channel, tunnel, conduit, well, discrete fissure, container, rolling stock, or vessel or other floating craft, from which pollutants are or may be discharged.

027 "Pollutant" shall mean any gas, liquid, or solid introduced into a body of water that causes water pollution.

028 "Recreationally Important Species" shall mean any game fish species identified by the Department which is important to sport fishermen and readily affected by water quality degradation.

029 "Salmonid" shall mean any fish belonging to the family Salmonidae. Trout are members of this family.

030 "Sensitive Species" shall mean any aquatic species identified by the Department which has a limited distribution in the State and is indigenous to stable, high quality aquatic environments.

031 "Settleable Solids" shall mean substances such as silt, organic detritus, plankton, and sand, which, because of particle size or lack of water currents, settle to the bottom of a stream course (or a laboratory sample bottle).

032 "Seven Day Mean" shall mean an average of the daily mean values calculated over a period of seven consecutive days.

033 "Seven Day Mean Minimum" shall mean an average of the one day minimum values calculated over a period of seven consecutive days.

034 "Seven-Day-Ten-Year Low Flow" shall mean the average low flow for seven consecutive days that is expected at a frequency of once every ten years.

035 "Specific Conductivity (Conductivity-Conductance)" shall mean a measure of the ability of water to conduct an electrical current and is expressed in micromhos per centimeter at 25°C. Because the specific conductivity is related to the number and types of chemical ions in solution, it can be used for approximating the dissolved-solids content of water.

036 "Surface Waters" shall mean all waters within the jurisdiction of this State, including all streams, lakes, ponds, impounding reservoirs, marshes, wetlands, watercourses, waterways, springs, canal systems, drainage systems, and all other bodies or accumulations of water, antural or artificial, public or private, situated wholly or partly within or bordering upon the State. Impounded waters in this definition do not include areas designated by the Department as wastewater treatment or wastewater retention facilities or irrigation reuse pits.

037 "Suspended Solids" shall mean substances such as erosional silt, organic detritus, plankton, and sand, which are held in suspension by water currents.

038 "Thermal Stratification" shall mean a characteristic of certain lakes in which distinct layers of water that differ in density exist because of temperature differences. These layers are resistant to mixing with each other.

039 "Thirty Day mean" shall mean an average of the daily mean values calculated over a period of thirty consecutive days.

040 "Threatened Species" shall mean any aquatic species identified by the Nebraska Game and Parks Commission

whose continued existence as a viable component of the wild fauna of the State appears likely to become endangered or which meets the criteria of the Federal Endangered Species Act.

041 "Toxic Substances" shall mean those pollutants or combinations of pollutants, or disease causing agents, which after discharge and upon exposure, ingestion, inhalation or assimilation into any organism, either directly from the environment or indirectly by ingestion through food chains, will on the basis of information available to the Department cause either death, disease, behavioral abnormalities, cancer, genetic mutations, physiological malfunctions (including malfunction in reproduction) or physical deformations, on such organism or their offspring.

042 "Un-ionized Ammonia" shall mean that portion of the total ammonia present that remains undissociated in water, and the form largely responsible for the toxicity of ammonia to aquatic life. The amount of un-ionized ammonia present is primarily dependent upon pH and temperature.

043 "Wastewater" shall mean water containing sewage, and/or industrial wastes, including, but not limited to, discharges from sand and gravel operations, cooling water, storm water, street and road runoff, return flow from irrigation, feedlot runoff, or wastes resulting from land erosion and other discharges, treated or untreated, which enter directly or indirectly into the waters of the State or to any storm sewer, and including the runoff from land used for the disposition of wastes.

044 "Water Pollution" shall mean the manmade or man-induced alteration of the chemical, physical, biological, and radiological integrity of water.

045 "Water Quality" shall mean the biological, chemical, physical, and radiological integrity of a body of water.

045.01 "Biological Integrity" shall mean the plant, animal, and bacteriological species composition of a body of water.

045.02 "Chemical Integrity" shall mean the inorganic and organic (nonliving) constituents of a volume of water.

045.03 "Physical Integrity" shall mean the physical properties (e.g., temperature, turbidity, sedimentation) of a body of water.

Nevada²⁸

045.04 "Radiological Integrity" shall mean the radioactive properties of a volume of water.

046 "Zone of Passage" shall mean the area outside of any mixing zone which allows for movement of aquatic organisms.

"Act" means the Federal Water Pollution Control Act Amendments of 1972 (33 U.S.C. 1251, et seq.)

"Administrator" means the administrator of the U.S. Environmental Protection Agency.

"Aquatic Animal Production Facility" means a hatchery, fish farm or other facility which contains, grows, or holds:

Fish or other aquatic animals in ponds, raceways, or other similar structures for purposes of production and from which there is a discharge on any 30 days or more per year, but does not include:

Closed ponds which discharge only during periods of excess runoff, or

Facilities which produce less than 20,000 pounds of aquatic animals per year;.

Any species of fish or other animal life (other than carp (*Cyprinus carpio*), goldfish (*Carassius auratus*), or brown trout (*Salmo trutta*) nonnative to the United States as defined in "Special Publication No. 6" of the American Fisheries Society entitled, "A List of Common and Scientific Names of Fishes from the U. S. and Canada," and from which there is a discharge at any time.

"Commission" means the state environmental commission.

"Complete treatment" means that degree of treatment which is required to continuously produce water which meets State Board of Health drinking water standards.

"Conventional treatment" means processes such as coagulation, sedimentation, filtration, and disinfection; however, it does not include desalting techniques.

"Department" means the Department of Conservation and Natural Resources.

"Director" means the Director of the Department or his designee.

"Discharge" means any addition of a pollutant or pollutants to water.

"Disinfection" means the destruction or inactivation of disease-producing organisms.

"Division" means the division of environmental protection of the Department of Conservation and Natural Resources.

"Effluent limitation" means any applicable state or federal water quality standard or limitation, which imposes any restriction or prohibition on quantities, rates or concentrations of chemical, physical, biological, and other constituents which are discharged from point sources into any waters of the state.

"Filtration" means a physical-chemical process for removing suspended and colloidal impurities from water by passage through a porous medium by the following mechanisms: absorption, flocculation, sedimentation, and straining.

"Individual sewage disposal system" means a system of sewage treatment tanks or tank and effluent absorption or percolation facilities serving a single-dwelling or structure.

"Industrial wastes" means wastes resulting from any process of industry, manufacturing, trade or business, or from the development or recovery of any natural resources.

"Interstate agency" means any agency of two or more states:

Established by or pursuant to an agreement or compact approved by the Congress of the United States; or

Having substantial powers of duties pertaining to the control of pollution of waters.

"Law" means NRS 445.131 to NRS 445-354, inclusive.

"Minor discharge" means any discharge which (1) has a total volume of less than 50,000 gallons on every day of the year, (2) does not affect the waters of any other state, and (3) is not identified by the director, the regional administrator, or by the administrator as a discharge which is not a minor discharge. If there is more than one discharge from a facility and the sum of the volumes of all discharges from the facility exceed 50,000 gallons on any day of the year, then no discharge from the facility is a minor discharge as defined herein.

"Municipality" means

Any city, town, county, district, association, or other public body created by or pursuant to the law of this state, which has jurisdiction over disposal of sewage, industrial wastes or other wastes; or

An Indian tribe or an authorized Indian tribal organization.

"NPDES" means the National Pollutant Discharge Elimination System, which is the national system for the issuance of permits under Section 402 of the Act.

"Natural waters" means waters which have not been degraded or enhanced by actions attributable to man.

"New source" means any source, the construction of which is commenced after the publication of proposed regulations prescribing a standard of performance under Section 306 of the Act which will be applicable to such source, if such standard is thereafter promulgated in accordance with Section 306 of the Act.

"Origin" means all waters tributary to those waters being classified and are considered a part of the waters being classified unless otherwise designated.

"Permit" means a written authorization to discharge pollutants into the waters of the state in accordance with the Act, the law, and the regulations promulgated thereunder.

"Person means:

The state or any agency or institution thereof, any individual, partnership, firm, private corporation, trust, estate, commission, board, public or private institution, utility, cooperative, municipality or other political subdivision of this state, any interstate body or any other legal entity.

"Point source" means any discernible, confined and discrete conveyance, including, but not limited to, any pipe, ditch, channel, tunnel, conduit, well, discrete fissure, container, rolling stock, concentrated animal feeding operation, or vessel or other floating craft, from which pollutants are or may be discharged.

"Pollutant" means:

Dredged spoil, solid waste, incinerator residue, sewage, garbage, sewage sludge, munitions, chemical wastes,

biological materials, and radioactive materials, heat, wrecked or discarded equipment, rock, sand, cellar dirt, and industrial, municipal, and agricultural waste discharge into water;

Does not mean water, gas, or other material which is injected into a well to facilitate production of oil or gas, or water derived in association with oil or gas production and disposed of in a well, if the well is used either for facilitating production or for disposal purposes and if the Department determines that such injection or disposal will not result in the degradation of ground or surface water resources.

"Pollution" means the man-made or man-induced alteration of the chemical, physical, biological, and radiological integrity of water.

"Pretreatment standards" means the standards promulgated under Section 307(b) of the Act.

"Refuse Act application" means the application for a permit under Section 13 of the Rivers and Harbors Act of March 3, 1899.

"Regional Administrator" means the Regional Administrator of the United States Environmental Protection Agency, Region IX.

"Sewage" means the water-carried human or animal waste from residences, buildings, industrial establishments, feedlots, or other places, together with such groundwater infiltration and surface water as may be present. The mixture of sewage with wastes and/or industrial wastes shall also be considered sewage within the meaning of these regulations.

"Source" means any building, structure, facility, or installation from which there is or may be the discharge of pollutants.

"Standard of performance" means a standard for the control of the discharge of pollutants which reflects the greatest degree of effluent reduction which the Administrator determines to be achievable through application of the best available demonstrated control technology, processes, operating methods, or other alternatives, including, where practicable, a standard permitting no discharge of pollutants.

"Toxic materials" means any material appearing on the list developed by the Administrator pursuant to Section 307(a) of the Act.

"Treatment or waste treatment" means the stabilization or alteration of the quality of waste waters by physical, biological, or chemical means, or a combination thereof, for the purpose of reducing or eliminating adverse effects on water quality, such that the tendency of said wastes to cause any degradation in water quality or other environmental conditions is reduced or eliminated.

"Treatment works" means:

Any devices and systems used in the storage, treatment, recycling, and reclamation of municipal sewage or industrial wastes of a liquid nature, including intercepting sewers, outfall sewers, sewage collection systems, pumping, power and other equipment, and their appurtenances;

Extensions, improvements, remodeling, additions, and alterations of any device or system mentioned above;

Units essential to provide a reliable recycled supply such as standby treatment units and clear well facilities;

Any works, including site acquisition of the land that will be an integral part of the treatment process or is used for ultimate disposal of residues resulting from such treatment; and

Any other method or system for preventing, abating, reducing, storing, treating, separating or disposing of municipal waste, including storm water runoff, industrial waste or waste in combined storm water and sanitary sewer systems.

"Water quality standards or limitations" means any applicable state or federal water quality standards or limitations, including, but not limited to, water quality criteria, water use classifications, implementation plans and compliance schedules, effluent standards and limitations, prohibitions, standards of performance and pretreatment methods.

"Waters of the state" means all water situated wholly or partly within or bordering upon the state, including but not limited to:

All streams lakes, ponds, impounding reservoirs, marshes, water courses, waterways, wells, springs, irrigation systems, and drainage systems, and

All bodies or accumulations of water, surface and underground, natural or artificial.

"Zone of mixing" means the volume of water near the point of waste discharge within which the water immediately mixes with the receiving water due to the momentum of the waste discharge and the difference in density between the waste and the receiving water.

"Zone of passage" means a continuous water route of the volume, cross-sectional area, and quality necessary to allow passage of free-swimming and/or drifting organisms with no significant effect produced on the aquatic population.

Antidegradation Policy: A policy which protects the current high water quality use even though the water may be classified for a lesser use. For example, a water body currently meeting the standards and used for swimming purposes cannot be degraded to a lesser use even if classified "C".

Coliform Organisms: Any of a number of organisms whose presence in water is a possible indication of potentially dangerous bacterial contamination emanation from human and animal wastes.

Disinfection: The killing of the larger portion (but not necessarily all) of the harmful and objectionable microorganisms, in or on, a medium by means of chemicals, heat, ultraviolet light, etc. Chlorination is the method commonly employed in water and sewage treatment processes.

Dissolved Oxygen (DO): The oxygen dissolved as a gas in sewage, water or other liquid usually expressed in milligrams per liter (mg/l), parts per million (ppm) or percent saturation. Adequate dissolved oxygen levels are necessary in waters to protect fish and other aquatic life and to prevent offensive odors. Low dissolved oxygen concentrations are generally due to excessive organic solids discharged as a result of inadequately treated waste (having high (BOD)); excessive algal growths may cause vastly fluctuating dissolved oxygen levels. Other factors such as temperature and water movement also have an impact on dissolved oxygen levels.

pH: The index of hydrogen ion activity, used as an indication of acidity or alkalinity in water. The pH of most waters ranges from 6.5 to 8.5, and most uses of water, such as aquatic life propagation, prosper at these levels.

Pollutant: Any introduced gas, solid, or liquid matter which renders a resource unfit for a specified use.

Surface Waters of the State: Streams, lakes, ponds and tidal waters within the jurisdiction of the State, including all streams, lakes or ponds bordering on the State, marshes, water courses and other bodies of water, natural or artificial.

Sewage: The water-carried waste products from buildings, public or private, together with such ground water infiltration and surface water as may be present.

Temperature: A measure of heat content. Extreme temperatures primarily affect the aquatic life uses of waters. While temperature is affected by natural conditions, man has a significant effect by the construction and operation of dams and the discharge of cooling waters from industrial processes, particularly power generation.

Toxic Materials: Poisonous compounds which kill, injure or impair an organism usually through chemical actions. Examples of toxic materials are pesticides and many heavy metals.

Warm- and Cold-Water Fish: Warm-water fish include bass, sunfish, cat-fish, suckers, etc; cold water fish include salmon, and trout, whitefish, smelts, shad, etc.

Waste: Unused, unwanted, or otherwise rejected matter.

The following words and terms shall have the following meanings unless the context clearly indicates otherwise.

Agricultural Water Supply - Water used for livestock or irrigation.

Ambient Temperature - The temperature of a water body unaffected by the localized heated waste discharge or discharge complex.

Anadromous Fish - Fish that spend a part of their lives in the sea or lakes, but ascend rivers to spawn.

Aquatic Substrata - Soil material and attached biota underlying the water.

Biota - The animal and plant life of the region; flora and fauna collectively.

Department - New Jersey Department of Environmental Protection.

Epilimnion - The upper warm region of a stratified body of water which is freely circulation and extends from

the surface to the thermocline and does not have a permanent temperature stratification.

Eutrophic Lake - Lakes with a good supply of nutrients; they may support rich organic production, such as alga blooms and are commonly deficient in dissolved oxygen below the thermocline when stratified.

Heat Dissipation Area - Localized area of surface water, as may be designated by the Department, into which thermal effluents may be discharged for the purpose of mixing, dispersing or dissipating such effluents without creating nuisances or hazardous conditions.

Hypolimnion - The lower cold region of a stratified body of water that extends from the thermocline to the bottom of the lake and is cut off from circulation with the upper waters, thereby receiving no oxygen from the atmosphere while stratified.

Industrial Water Supply - Water used for processing and cooling.

Mixing Areas - Localized areas of surface waters, as may be designated by the Department, into which non-thermal wastewater effluents may be discharged for the purpose of mixing, dispersing or dissipating such effluents without creating nuisances or hazardous conditions.

Natural Temperature - Temperature that would exist in a waterway without the addition of heat of artificial origin.

Nontrout Waters - Waters, that because of their physical and/or chemical and/or biotic characteristics, are not suitable for trout but which, in general, are suitable for a wide variety of other fish species.

Primary Contact Recreation - Recreational activities that involve significant ingestion risks and including, but not limited to wading, swimming, diving, surfing, and water skiing.

Secondary Contact Recreation - Recreational activities where the probability of significant contact or water ingestion is minimal and including, but not limited to, boating, fishing, and those other activities involving limited contact with surface waters incident to shoreline recreation.

Stream Temperature: Temperature of a stream outside of the designated heat dissipation area.

Surface Water Classifications - Surface waters of this State identified as Fresh (FW), Tidal (TW), and Coastal (CW). This includes both interstate and intrastate waters.

Thermocline - The middle layer of a stratified body of water in which the drop in temperature equals or exceeds 1.8 degrees F (1 degree C) per meter of depth.

Thermal Alterations - The increase or decrease in temperature of surface waters above or below the natural that may be caused by the activities of man.

Trout Maintenance Waters - Waters that support trout throughout the year or which have high potential for such use pending the correction of short term environmental alterations. Waters in which the biotic community is manipulated for the purpose of trout maintenance and which are otherwise not naturally suited for such purposes are not included.

Trout Production Waters - Waters that are used by trout for spawning and/or nursery purposes during their first summer; or which are considered to have high potential for such use pending the correction of short term environmental alterations.

Wildlife - All undomesticated animals or fowl.

New Mexico³¹

A. "Attainable use" means a use of a surface water of the State which has water quality and all other characteristics necessary to support and maintain the use, as specified in Section 3-101 of these standards, or which would support and maintain the use after the implementation of water quality standards as specified in Section 1-101.B of these standards.

B. "Coldwater Fishery" means a stream reach, lake or impoundment where the water temperature and other characteristics are suitable for the support of coldwater fishes such as brown, cutthroat, brook, or rainbow trout.

C. "cfs" means cubic feet per second.

D. "Domestic Water Supply" means a surface water that may be used for drinking or culinary purposes after disinfection.

E. "Ephemeral stream" means a stream or reach of a stream that flows briefly only in direct response to precipitation or snowmelt in the immediate locality; its channel bed is always above the water table of the region adjoining the stream.

F. "Fecal Coliform Bacteria" means the portion of the coliform group which is present in the gut or the feces of warmblooded animals. It generally includes organisms which are capable of producing gas from lactose broth in a suitable culture medium within 24 hours at 44.5 ± 0.2 C.

G. "Fish Culture" means production of coldwater or warmwater fish in a hatchery or rearing station.

H. "Flow" relative to the four definitions of streams herein means natural flow ensuing from the earth's hydrologic cycle, i.e., atmospheric precipitation resulting in surface and, or, ground-water runoff. Natural, in-stream flow may be interrupted or eliminated by dams and diversions, but natural flow cannot be created artificially by point-source discharges of wastewater.

I. "FTU" means formazin turbidity units (see "Standard Methods for the Examination of Water and Wastewater").

J. "High Quality Coldwater Fishery" means a perennial stream reach in a minimally disturbed conduit which has considerable aesthetic value and is a superior coldwater fishery habitat. A stream reach to be so categorized must have water quality, stream bed characteristics, and other attributes of habitat sufficient to protect and maintain a propagating coldwater fishery (i.e., a population of reproducing salmonids).

K. "Intermittent stream" means a stream or reach of a stream that flows only at certain times of the year, such as when it receives flow from springs, melting snow, or localized precipitation. Syn: temporary stream; seasonal stream.

L. "Interrupted stream" means a stream that contains perennial reaches with intervening intermittent or ephemeral reaches. Ant: continuous stream.

M. "Interstate Waters" means all waters which cross or form a part of the border between States.

N. "Intrastate Waters" means all waters of the State which are not interstate waters.

O. "LC-50" means the concentration of a substance that is lethal to 50% of the test organisms within a defined time period.

P. "Limited Warmwater Fishery" means a stream reach where intermittent flow may severely limit the ability

of the reach to sustain a natural fish population on a continuous annual basis; or a stream where historical data indicate that water temperature may exceed 32.2 C (90 F).

Q. "Limiting Nutrient" means the nutrient or combination of nutrients available in minimal quantities with respect to the growth requirements of algae and higher aquatic plants and upon which the growth of these organisms is therefore dependent.

R. "Marginal Coldwater Fishery" means a stream reach, lake or impoundment known to support a coldwater fish population during at least some portion of the year, even though historical data indicates that the maximum temperature in the stream may frequently exceed 20°C (68°F).

S. "Milligrams per liter (mg/l)" means milligrams of solute per liter of solution., equivalent to parts per million when the specific gravity of the solution = 1.000.

T. "Perennial stream" means a stream or reach of a stream that flows continuously throughout the year in all years; its upper surface, generally, is lower than the water table of the region adjoining the stream.
Syn: permanent stream; live stream.

U. "Point source" means any discernible, confined, and discrete conveyance from which pollutants are or may be discharged into a water body, but does not include return flows from irrigated agriculture.

V. "Primary Contact" means any recreational or other water use in which there is prolonged and intimate contact with the water, such as swimming and water skiing, involving considerable risk of ingesting water in quantities sufficient to pose a significant health hazard.

W. "Secondary Contact" means any recreational or other water use in which contact with the water may occur and in which the probability of ingesting appreciable quantities of water is minimal, such as fishing, wading, commercial and recreational boating and any limited seasonal contact.

X. "Segment" means a water quality standards segment, the surface waters of which have common hydrologic characteristics or flow regulation regimes, possess common natural physical, chemical, and biological characteristics, and exhibit common reactions to external stresses, such as the discharge of pollutants.

Y. "TDS" means total dissolved solids.

Z. "Technology-based controls" means the application of technology-based effluent limitations as required under Section 301(b) of the Clean Water Act.

AA. "Total Inorganic Nitrogen" means the sum of nitrate nitrogen, nitrite nitrogen, and total ammonia nitrogen.

BB. "Warmwater Fishery" means a stream reach, lake or impoundment where the water temperature and other characteristics are suitable for the support of warmwater fishes such as large-mouth black bass, small-mouth black bass, crappie, white bass, bluegill, flathead catfish, or channel catfish.

CC. "Water" means all water including water situated wholly or partly within or bordering upon the state, whether surface or subsurface public or private, except private waters that do not combine with other surface or subsurface water.

DD. "Water contaminant" means any substance which alters the physical, chemical or biological qualities of water.

EE. "Watercourse" means any river, creek, arroyo, canyon, draw, or wash, or any other channel having definite banks and beds with visible evidence of the occasional flow of water. Syn: stream.

FF. "Water pollutant" means a water contaminant in such quantity and of such duration as may with reasonable probability injure human health, animal or plant life or property, or to unreasonably interfere with the public welfare or the use of property.

GG. "Water quality-based controls" means effluent limitations, as provided under Section 301(b)(1)(C) of the Clean Water Act, which are developed and imposed on point-source dischargers in order to protect and maintain applicable water quality standards. These controls are more stringent than the technology-based effluent limitations required under other paragraphs of Section 301(b).

HH. Industrial water supply, municipal and industrial water supply, livestock and wildlife watering, irrigation storage, municipal and industrial water storage are self explanatory and no definitions are needed.

(a) Commissioner shall mean the Commissioner of the Department of Environmental Conservation.

(b) Administrator shall mean the Administrator of the United States Environmental Protection Agency.

(c) Best usage of waters as specified for each class shall be those uses as determined by the commissioner and the administrator in accordance with the considerations prescribed by the Environmental Conservation Law and Public Law 92-500.

(d) Approved treatment as applied to water supplies shall mean treatment accepted as satisfactory by the authorities responsible for exercising supervision over the sanitary quality of water supplies.

(e) Source of water supply for drinking, culinary or food processing purposes shall mean any source, either public or private, the waters from which are used for domestic consumption or used in connection with the processing of milk, beverages or foods. (When water is taken for public drinking, culinary or food processing purposes, refer to New York State Department of Health regulations 10 NYCRR 170)

(f) Primary contact recreation shall mean recreational activities where the human body may come in direct contact with raw water to the point of complete body submergence. Such uses include swimming, diving, water skiing, skin diving and surfing.

(g) Secondary contact recreation shall mean recreational activities where contact with the water is minimal and where ingestion of the water is not probable. Such uses include, but are not limited to, fishing and boating.

(h) Saline surface waters shall mean all waters which are so designated by the commissioner.

(i) International boundary waters shall mean those waters to which the water quality standards developed and adopted pursuant to the Boundary Water Treaty of 1909 and the Great Lakes Quality Agreement of 1972 apply.

(j) Sewage, industrial waste and other wastes shall have the meanings given in section 17-0105 of the Environmental Conservation Law.

(k) Estuary shall mean the tidal portion of a river or stream.

(l) A thermal discharge is one which results or would result in a temperature change of the receiving water.

(m) Heat of artificial origin shall mean all heat from other than natural sources including, but not limited to, cumulative effects of multiple and proximate thermal discharges.

(n) Coastal waters shall mean those marine waters within the territorial limits of the State other than estuaries and enclosed bays. Long Island Sound is designated as coastal waters for the purposes of thermal discharges.

(o) Enclosed bays shall mean those marine waters within the territorial limits of New York State, other than coastal waters or estuaries, in which exchange of sea water is severely limited by barrier beaches. For the purposes of thermal discharges, the following are designated as enclosed bays: Jamaica Bay, Hempstead Bay, Great South Bay, Moriches Bay, Shinnecock Bay and Mecox Bay.

North Carolina³³

(1) Source of water supply for drinking, culinary, or food-processing purposes shall mean any source, either public or private, the waters from which are used for human consumption, or used in connection with the processing of milk, beverages, food, or other purposes which require water meeting the maximum contaminant levels promulgated by the Environmental Protection Agency pursuant to the Public Health Service Act, 42 U.S.C. 201 et seq., as amended by the Safe Drinking Water Act, 42, U.S.C. 300 (f) et seq.

(2) Approved treatment, as applied to water supplies, means treatment accepted as satisfactory by the health authorities responsible for exercising supervision over the sanitary quality of water supplies.

(3) Primary recreation shall include swimming, skin diving, skiing, and similar uses involving human body contact with water where such activities take place in an organized or on a frequent basis.

(4) Secondary recreation shall include wading, boating, other uses not involving human body contact with water, and activities involving human body contact with water where such activities take place on an infrequent, unorganized, or incidental basis.

(5) Fishing shall include the propagation of fish and other such aquatic life as is necessary to provide a suitable environment for fish.

(6) Shellfish culture shall include the use of waters for the propagation, storage and gathering of oysters, clams, and other shellfish for market purposes.

(7) Agricultural shall include the use of waters for stock watering, irrigation, and other farm purposes but not as sources of water supply for drinking, culinary, or food-processing purposes.

(8) Waste disposal shall include the use of waters for the disposal of sewage, industrial waste, or other waste after approved treatment.

(9) Tidal Salt Waters shall mean all tidal waters which are so designated by the Environmental Management commission and which generally have a natural chloride ion content in excess of 500 parts per million.

(10) Swamp Waters shall mean those waters which are so designated by the Environmental Management Commission and which are topographically located so as to generally have very low velocities and certain other characteristics which are different from adjacent streams draining steeper topography.

(11) Offensive conditions shall be construed to mean and include any condition or conditions resulting from the presence of sewage, industrial wastes, or other wastes within the waters of the state of along the shorelines thereof which shall either directly or indirectly cause foul or noxious odors, unsightly conditions, or breeding of abnormally large quantities of mosquitoes or other insect pests, or shall damage private or public water supplies or other structures, result in the development of gases which destroy or damage surrounding property, herbage or grasses, or which shall affect the health of any person residing or working in the area.

(12) Mountain and upper piedmont waters shall mean all the waters of the Hivasssee; Little Tennessee, including the Savannah River Drainage Area; French Broad, Broad, New and Watauga River Basin and those portions of the Catawba River Basin above Lookout Shoals Dam and the Yadkin River Basin above the junction of the Forsyth, Yadkin and Davie County lines.

(13) Lower piedmont and coastal plain waters shall mean those waters of the Catawba River Basin below Lookout Shoals Dam; the Yadkin River Basin below the junction of the Forsyth, Yadkin, and Davie county lines and all the waters of Cape Fear; Lumber;

Roanoke; Neuse; Tar-Pamlico; Chowan; Pasquotank; and White Oak River Basins, except tidal salt waters which are assigned "S" classifications.

(14) Estuarine Waters shall mean those tidal salt waters assigned "S" classifications.

(15) Best usage of waters as specified for each class shall be those uses as determined by the Environmental Management Commission in accordance with the provisions of Article 21, Chapter 143, General Statutes of North Carolina, as amended.

(16) Parts per million and parts per billion as used herein shall be construed to mean milligrams per liter (mg/l), and micrograms per liter (ug/l), respectively, as defined in the latest edition of "Standard Methods for the Examination of Water and Wastewater," published by the American Public Health Association, American Water Works Association, and Water Pollution Control Federation.

(17) Present waste treatment technology shall mean for industrial wastewaters "Best Available Technology Economically Available," or "New Source Performance Standards" if applicable and more stringent, as published in the Federal Register. Where such limits have not been published or adopted they shall be established in accordance with 15 NCAC 2B .0405 (c). For municipal wastewater and other similar discharges greater than 15,000 gpd, present waste treatment technology shall be defined, for oxygen consuming wastes, as follows:

Ammonia Nitrogen 2.0 mg/l monthly average; 3.0 mg/l weekly average

BOD 5.0 mg/l monthly average; 7.5 mg/l weekly average

For municipal wastewater and other similar discharges equal to or less than 15,000 gpd, present waste treatment technology shall be defined, for oxygen consuming wastes, as follows:

BOD 30 mg/l monthly average; 45 mg/l weekly average

(18) 96-hour LC50 shall mean that concentrations of a toxicant which is lethal (fatal) to 50 percent of the organisms tested under the test conditions in a period of 96 hours. The 96-hour LC50 concentration for toxic materials shall be determined for a sensitive indigenous species in water conditions characteristic of the receiving waters by a review of existing experimental data or, if deemed necessary, by the

director of the division, by bioassays conducted by or in cooperation with the division.

(a) Be contained entirely on property owned (or controlled by easement) by the discharger (to be demonstrated by the discharger).

(b) Not contain natural waters except when such waters occur in direct response to rainfall events by overland runoff.

(c) Be so constructed or modified to minimize the migration of fish into said channel.

Effluent channels shall be identified and designated on a case-by-case basis prior to permit issuance.

(20) Division shall mean the Division of Environmental Management or its successors.

North Dakota³⁴

02.201 Water Usage - The best usage for the waters shall be those uses determined to be the most consistent with present and potential uses in accordance with the economic and social development of the area. Present principal best uses are those defined in parts 1, 2, 3, and 4, of this Section but are not to be construed to be the only possible usages permitted.

(1) Recreation, Fishing and Wildlife - Waters that are suitable for the propagation and/or support of fish and other aquatic life; that will not adversely affect wildlife in the area; and are suitable for boating and swimming.*

*Natural high turbidities in some waters and physical characteristics of banks and stream beds of many streams are factors that limit their values for bathing. Low flows or natural physical and chemical conditions in some waters may limit their value for fish propagation or aquatic life.

(2) Municipal and Domestic Water - Waters that are suitable for use as a source of water supply for drinking and culinary purposes after treatment to a level approved by the State Health Department.

(3) Industrial Water - Waters that are suitable for industrial purposes, including food processing, after treatment. Treatment may include that necessary for prevention of boiler scale and corrosion.

(4) Agricultural Uses - Water suitable for irrigation,

stock watering, and other agricultural uses, but not suitable for use as a source of domestic supply for the farm unless satisfactory treatment is provided.

02.202 Pollution - Pollution shall mean such contamination; or other alteration of the physical, chemical, or biological properties, of any waters of the State, including change in temperature, taste, color, turbidity, or odor of the waters; or such discharge of any liquid, gaseous, solid, radioactive, or other substance into any waters of the State as will or is likely to create a nuisance or render such waters harmful, detrimental, or injurious to public health, safety, or welfare, or to domestic, commercial, industrial, agricultural, recreational, or other legitimate beneficial uses, or to livestock, wild animals, birds, fish, or other aquatic life.

Ohio³⁵

45-1-02 DEFINITIONS

- (A) "Act" means the federal Water Pollution Control Act, as amended, 33 U.S.C. 1251 et seq.
- (B) "Ambient water temperature" means the spatial (longitudinal, lateral and vertical) and temporal water temperature measured in the receiving body of water prior to a specific waste heat discharge, and is outside the influence of any thermal mixing zone.
- (C) "Application factor" means a numerical value which modifies the LC₅₀ or other bioassay test and point to take into account population condition, duration, or end point differences. When the test and point is modified by the application factor, it provides the concentration of an effluent or toxic substance that would be safe for aquatic organisms in the waters of the State for the long term.
- (D) "Average temperature" represents the arithmetic mean of multiple daily average temperatures over a consecutive 15- or 30-day period.
- (E) "°C" means degrees(s) Celsius.
- (F) "Coldwater fish" means those species of fish that thrive in relatively cold water. These species include, but are not limited to, salmon trout (Salmonidae), and may include sculpins (Cottidae), and certain minnow (Cyprinidae) species.
- (G) "Comprehensive Water Quality Report" means the use attainability analysis performed by the Ohio Environmental Protection Agency that includes

biological and chemical water quality surveys of surface waters of the State, wasteload allocation modeling, and social and economic analyses of the impact of pollution control.

- (H) "Confluence" means the point where two or more bodies of water flow together.
- (I) "Criteria" mean elements of Water Quality Standards, expressed as constituent concentrations, levels, or narrative statements, representing a quality of water that supports a particular designated use.
- (J) "Daily average temperature" means the arithmetic mean of multiple temperature measurements to be taken at least once per hour during a 24-hour day.
- (K) "Degradation" means a lowering of the existing water quality in the surface waters of the State.
- (L) "Designated use" means a use of the surface waters of the State, established by the Water Quality Standards, Chapter 3745-1 of the Administrative Code.
- (M) "Director" means the Director of the Ohio Environmental Protection Agency.
- (N) "Discharge" means the addition of any pollutant to the waters of the State from a point source.
- (O) "Disease" means a condition which results in a deviation of the body of an organism from its normal or healthy state.
- (P) "Dynamic bioassay" means a determination of the biological effect of a substance, factor or condition through the use of living organisms or cells as the indicator in a continuous flow-through system.
- (Q) "Estuary" means the section of a Lake Erie tributary near the mouth where tributary and Lake Erie waters mix. This area is characterized by flow reversals and seiche influences and is generally located between the farthest downstream riffle of the tributary and Lake Erie proper. All tributaries of estuaries shall be considered estuaries below the Lake Erie mean high water level.
- (R) "Endangered species" means those aquatic species of the State's biota which are threatened with

statewide extirpation or national extinction, as listed in Rule 1501:31-23-01 of the Administrative Code or 50 CFR Part 17.

- (S) "°F" means degree(s) Fahrenheit.
- (T) "Fecal coliform" means the portion of the coliform group of bacteria which is present in the intestinal tract of warm-blooded animals, and is evidence of the presence of human or animal wastes.
- (U) "Geometric mean" means the Nth root of the product of N quantities.
- (V) "Lake Erie fish" means those species of fish that inhabit Lake Erie. These species include, but are not limited to, bass, crappies, and sunfish (Centrarchidae), catfish (Ictaluridae), suckers (Catostomidae), minnows (Cyprinidae), and perch, walleye and darters (Percidae).
- (W) "LC₅₀" means the median lethal concentration and means the concentration of a test material in a suitable diluent at which 50 percent of the exposed organisms die in a specified period of exposure. LC₅₀ is often used interchangeably with median tolerance limit (TL₅₀), which measures the concentration at which 50 percent of the exposed organisms survive.
- (X) "Limited" means a designated use for a stream which is not attaining its potential aquatic life use.
- (Y) "Long-term avoidance" means the permanent or prolonged avoidance by a species population of an area or habitat that was formerly inhabited by that species population, but is absent or significantly reduced in density and biomass as a result of permanent limiting or unfavorable environmental conditions.
- (Z) "Maximum daily temperature" means the highest temperature observed in a 24-hour day.
- (AA) "MF" means membrane filter.
- (BB) "Micrograms per liter µg/l" means the micrograms of substance per liter of solution, and is 1/1000 of a milligram per liter.
- (CC) "Milligrams per kilogram (mg/kg)" means the milligrams of substance per kilogram of weight.

- (DD) "Milligrams per liter (mg/l)" means the milligrams of substance per liter of solution, and is equivalent to parts per million, assuming unit density.
- (EE) "Mine drainage" means surface or groundwater flowing through or from mines and mine sites. It is usually characterized by concentrations of acidity or alkalinity, various heavy metals, sulfates, and dissolved solids.
- (FF) "Mixing zone" means an area of a water body contiguous to a treated or untreated wastewater discharge. The discharge is in transit and progressively diluted from the source to the receiving system. The mixing zone should be considered a place where wastewater and receiving water mix and not as a place where wastes are treated.
- (GG) "MPN" means most probably number.
- (HH) "Natural conditions" mean those conditions that are measured outside the influence of man's activities.
- (II) "New source" means any point source for which construction is commenced after January 1, 1985.
- (JJ) "Non-persistent toxicant" means a toxic substance with a half-life less than 8 weeks, that is readily degraded in an aquatic system, and does not have a tendency to bioaccumulate, biomagnify or bioconcentrate in organisms.
- (KK) "Nonpoint source" means any sources of pollutants other than those defined as point sources.
- (LL) "Nursery areas" mean regions in a water body where young or newly hatched organisms occur in relatively higher concentrations than surrounding areas.
- (MM) "Persistent toxicant" means one which either: (1) by itself or as its toxic transformation product, has a half-life for degradation under natural environmental conditions of more than 8 weeks, or (2) by itself or as its toxic transformation product, upon entering surface waters may biomagnify, bioconcentrate or bioaccumulate through successive trophic levels in the biota of the receiving water.

- (NN) "pH" means the negative logarithm of the hydrogen ion activity concentrations when expressed as moles per liter or $\text{pH} = -\log (\text{H}^+)$.
- (OO) "Point source" means any discernible, confined or discrete conveyance from which a pollutant is or may be discharged to the surface waters of the State.
- (PP) "Pollutant" means sewage, industrial waste or other waste as defined by divisions (B) to (D) of Section 6111.01 of the Revised Code.
- (QQ) "Receiving waters" mean the surface waters of the State into which point and nonpoint sources flow.
- (RR) "Representative aquatic species" mean those organisms, either natural or introduced, which presently exist or have existed in the surface waters of the State prior to July 1, 1977, with the exception of those banned species outlined in Rule 1501:31-19-01 of the Administrative Code. In addition, it may include any species that are legally introduced into the surface waters of the State. Aquatic species designated as representative shall satisfy one or more of the following:
- (1) Species which are particularly vulnerable to the existing or proposed environmental impact in question;
 - (2) Species which are commercially or recreationally valuable;
 - (3) Species which are threatened, rare, or endangered;
 - (4) Species which are critical to the structure and function of the aquatic community;
 - (5) Species whose presence is causally related to the existing or proposed environmental impact under examination;
 - (6) Species that are potentially capable of becoming localized nuisance species;
 - (7) Species that are representative of the ecological, behavioral, and physiological requirements and characteristics of species determined in paragraphs (RR)(1) to (RR)(6) of this rule, but which themselves may not be representative; or

- (8) Species that the Director may designate for a specific water body of the State which includes, but are not limited to, those species listed in Table 11 of Rule 3745-1-07 of the Administrative Code.
- (SS) "Seven-day, ten-year low flow (7Q10)" means the minimum flow of a stream over a consecutive 7-day flow period which has a statistical frequency of recurrence of once in 10 years, based on methods presented in "Low-Flow Characteristics of Ohio Streams," D.P. Johnson and K.D. Metzker, U.S.G.S. Report 81-1195, Columbus, Ohio, 1981.
- (TT) "Spawning areas" mean regions in a water body, such as reefs, marshes, wetlands, backwaters, and riffles where fish or other aquatic organisms spawn or breed in relatively higher concentrations than surrounding areas.
- (UU) "Static bioassay" means a determination of the biological effect of a substance, factor or condition employing living organisms or cells as the indicator. In a static system, test organisms remain in the same test medium for the duration of the test.
- (VV) "Surface waters of the State" or "watercourses" mean all streams, publicly owned lakes and reservoirs, ponds, marshes, wetlands or other waterways which are situated wholly or partially within the boundaries of the State, except those private waters which do not combine or effect a junction with natural surface waters. Waters defined as sewerage system, treatment works or disposal system in Section 6111.01 of the Revised Code are not included.
- (WW) "Thermal mixing zone" means that portion of a water body into which waste heat is discharged and assimilated, and within which the average and maximum daily average temperatures do not apply, except as prescribed by these Rules.
- (XX) "Toxic substances" mean any substances which can cause death, disease, behavioral abnormalities, cancer, genetic mutations, physiological or reproductive malfunction or physical deformities in any organism or its offspring, or which can become poisonous after concentration in the food chain or in combination with other substances.

- (YY) "Tributary" means a stream flowing into a larger body of water.
- (ZZ) "Use attainability analysis" means a structured scientific assessment of the factors affecting the attainment of the use which may include physical, chemical, biological, and economic factors.
- (AAA) "Warmwater fish" means those species of fish that inhabit relatively warm water. These species include, but are not limited to, bass, crappies and sunfish (Centrarchidae), and catfish (Ictaluridae), and may include certain suckers (Catostomidae), minnows (Cyprinidae), and perch and darter (Percidae) species.
- (BBB) "Waste heat discharge" means a point source discharge through which excess heat is rejected into the surface waters of the State.
- (CCC) "Water Quality Standards" means the Rules set forth in Chapter 3745-1 of the Administrative Code establishing stream use designations and water quality criteria protective of such uses for the surface waters of the State.
- (DDD) "Wetlands" mean areas of land where the water table is at, near or above the land surface long enough each year to result in the formation of characteristically wet (hydric) soil types, and support the growth of water dependent (hydrophytic) vegetation. Wetlands include, but are not limited to, marshes, swamps, bogs, and other such low-lying areas.

Oklahoma³⁶

Abatement - Reduction of the degree or intensity of pollution.

Allowable load - For perennial streams - the allowable load for oxygen demanding substances shall be based on attaining an instream D.O. of 5.0 mg/l for warm waters and 6.0 mg/l for those waters designated as smallmouth bass or trout fisheries, at and above the seven-day, two-year low flow value.

For intermittent streams - the allowable loading for oxygen demanding substances shall be based on attaining an instream D.O. of 5.0 mg/l at and above 1.0 cfs.

Alpha particle - A positively charged particle emitted by certain radioactive materials. It is the least

penetrating of three common types of radiation (alpha, beta and gamma) and usually is not dangerous to plants, animals, or humans.

Anti-degradation clause - A provision in water quality laws that prohibits deterioration of water quality in areas where pollution levels are presently below those allowed.

Assimilative capacity - The amount of pollution a stream can receive and still recover without permanent damage or alteration of beneficial uses.

Benthic macroinvertebrates - Invertebrate animals that are large enough to be seen by the unaided eye and can be retained by a U.S. Standard No. 30 sieve, and live at least part of their life cycles within or upon available substrates in a body of water or water transport system.

Beta particle - A negatively charged elementary particle emitted by radioactive decay that may cause skin burns. It is easily stopped by a thin sheet of metal.

Carcinogenic - Cancer producing.

Coliform group organisms (total coliform organisms) - All of the aerobic and facultative anaerobic gram-negative, non-spore-forming rod shaped bacteria that ferment lactose broth with gas formation within 48 hours at 35°C.

Color - Color as used herein means true color as well as apparent color. True color is the color of the water from which turbidity has been removed. Apparent color includes not only the color due to substances in solution (true color), but also that color due to suspended matter.

Conservative element - A substance which persists in the environment, having characteristics which are resistant to ordinary biological degradation.

Dissolved oxygen (DO) - The amount of oxygen dissolved in water at any given time, depending upon the water temperature, the partial pressure of oxygen in the atmosphere in contact with the water, the concentration of dissolved salts in the water, and the physical aeration of the water.

Epilimnion - The uppermost homothermal region of a stratified lake.

Eutrophication (natural) - The normally slow aging process by which a lake evolves into a bog or marsh and ultimately assumes a terrestrial state. During eutrophication the lake becomes so rich in nutritive compounds (especially nitrogen and phosphorus) that algae and other microscopic plant life become superabundant, thereby "choking" the lake, and causing the lake to advance in seral stages.

Fecal coliform - A group of organisms common to the intestinal tracts of man and of animals. The presence of fecal coliform bacteria in water is an indicator of pollution and of potentially dangerous bacterial contamination.

Geometric mean - $G_m = \sqrt[n]{B_1 \times B_2 \times \dots \times B_n}$

Where: n = number of samples and B_n = the bacterial count for n^{th} sample..

Intermittent stream - A stream or reach of a stream that flows only at certain times of the year. In such streams the runoff from the watershed is smaller than the ground evaporation and seepage losses in the ground.

Nephelometric turbidity (unit NTU) - This method is based upon a comparison of the intensity of light scattered by the sample under defined conditions with the intensity of light scattered by a standard reference suspension (formazin). The higher the intensity of scattered light, the higher the turbidity. Readings in NTU's are considered comparable to the previously reported Jackson Turbidity Units (JTU).

Non-conservative element - A substance which undergoes degradation or change in the environment other than dilution.

Nonpoint source - A source of pollution without a well defined point of origin.

Nutrients - Elements of compounds essential as raw materials for organisms growth and development; these include carbon, oxygen, nitrogen and phosphorus.

Polychlorinated biphenyls (PCB's) - Polychlorinated biphenyls, a group of organic compounds (206 possible) which is constructed of two phenyl rings and more than one chlorine atom. PCB's are used as an electrical insulating fluid in capacitors and transformers, and in the manufacture of plastics.

Perennial streams - A stream or reach of a stream that flows continuously throughout the year either due to watershed runoff or to inflow of the ground water to the stream.

Picocurie (pCi) - That quantity of radioactive material producing 2.22 nuclear transformations per minute.

Point source - Any discernible, confined and discrete conveyance, including, but not limited to, any pipe, ditch, channel, tunnel, well, discrete fissure, container, rolling stock or concentrated animal feeding operation from which pollutants are or may be discharged. This term does not include return flows from irrigated agriculture.

Pollution - Contamination or other alteration of the physical, chemical or biological properties of any natural waters of the State, or such discharge of any liquid, gaseous or solid substance into any waters of the State as will or is likely to create a nuisance or render such waters harmful or detrimental or injurious to public health, safety or welfare, or to domestic, commercial, industrial, agricultural, recreational, or other legitimate beneficial uses, or to livestock, wild animals, birds, fish or other aquatic life. (82 O.S. Supp. 1976 ss926.1 (1))

Salinity - The degree of salt in water.

Sample standard - The arithmetic mean of historical data plus two standard deviations of the mean.

Seven-day, two-year low flow - A seven-day, two-year low flow is specified as the design flow for determining allowable discharge load to a stream. The flow is calculated as a moving average of seven consecutive days for each year in a given record. These seven-day low flow values are ranked in ascending order. An order number (m) is calculated based upon the number of years record (n), with a recurrence interval (R) of two years, as $m = (n-1)/R$, where $R =$ two years. A value of flow corresponding to the m^{th} order is taken as the seven-day, two-year low flow for that historical data.

Standard deviation - A statistical measure of the dispersion around the arithmetic mean of the data.

Similarity index -

Where:

$S = 2C / (A + B)$ A = No. of species in the sample at
upstream station
B = No of species
in the sample at
downstream station
C = No of species
common to both A and B

Synergistic effect - Indicates the presence of cooperative pollutant action such that the total effect is greater than the sum of the effects of each pollutant taken individually.

LC50 - Lethal Concentration - the concentration of a toxicant in an external medium that is lethal to fifty percent of the test animals for a specified period of exposure.

Thermal pollution - Degradation of water quality by the introduction of heated effluent. Primarily a result of the discharge of the cooling waters from industrial processes particularly from electrical power generation.

Thermal stratification - Horizontal layers of different densities produced in a lake due to temperature.

Wastes - Industrial waste and all other liquid, gaseous or solid substances which may pollute or tend to pollute any waters of the State. (82 O.S. Supp. 1976, ss926.1 (2))

Waters of the State - All streams, lakes, ponds, marshes, watercourses, waterways, wells, springs, irrigation systems, drainage systems, and all other bodies or accumulations of water, surface and underground, natural or artificial, public or private, which are contained within, flow through, or border upon this State or any portion thereof, except privately owned reservoirs used in the process of cooling water for industrial purposes, provided that water released from any such reservoir into a stream system of the State shall be and become waters of the State. (82 O.S. supp. 1976, ss926.1 (6)).

Yearly mean standard - The arithmetic mean of historical data plus one standard deviation of the mean.

Applicable to all basins unless context requires otherwise:

A. "BOD" means 5-day 20°C. Biochemical Oxygen Demand.

B. "DEQ" or "Department" means the Oregon State Department of Environmental Quality.

C. "DO" means Dissolved Oxygen.

D. "EQC" means the Oregon State Environmental Quality Commission.

E. "Estuarine waters" means all mixed fresh and oceanic waters in estuaries or bays from the point of oceanic water intrusion inland to a line connecting the outermost points of the headlands or protective jetties.

F. "Industrial waste" means any liquid, gaseous, radioactive or solid waste substance or a combination thereof resulting from any process of industry, manufacturing, trade or business, or from the development or recovery of any natural resources.

G. "Marine waters" means all oceanic, offshore waters outside of estuaries or bays and within the territorial limits of the State of Oregon.

H. "mg/l" means milligrams per liter.

I. "Pollution" means such contamination or other alteration of the physical, chemical or biological properties of any waters of the state, including change in temperature, taste, color, turbidity, silt or odor of the waters, or such radioactive or other substance into any waters of the state which either by itself or in connection with any other substance present, will or can reasonably be expected to create a public nuisance or render such waters harmful, detrimental or injurious to public health, safety or welfare, or to domestic, commercial, industrial, agricultural, recreational or other legitimate beneficial uses or to livestock, wildlife, fish or other aquatic life or the habitat thereof.

J. "Public water" means the same as "waters of the state".

K. "Sewage" means the water-carried human or animal waste from residences, buildings, industrial establishments or other places together with such groundwater infiltration and surface water as may be

present. The admixture with sewage as herein defined of industrial wastes or wastes, as defined in subsections (F) and (M) of this sections, shall also be considered "sewage" within the meaning of this division.

L. "SS" means Suspended Solids.

M. "Wastes" means sewage, industrial wastes, and all other liquid, gaseous, solid, radioactive, or other substances which will or may cause pollution or tend to cause pollution of any water of the state.

N. "Waters of the state" include lakes, bays, ponds, impounding reservoirs, springs, wells, rivers, streams, creeks, estuaries, marshes, inlets, canals, the Pacific Ocean within the territorial limits of the State of Oregon and all other bodies of surface or underground waters, natural or artificial, inland or coastal, fresh or salt, public or private (except those private waters which do not combine or effect a junction with natural surface or underground waters), which are wholly or partially within or bordering the state or within its jurisdiction.

O. "Low Flow Period" means the flows in a stream resulting from primarily groundwater discharge or baseflows augmented from lakes and storage projects during the driest period of the year. The dry weather period varies across the state according to climate and topography. Wherever the Low Flow Period is indicated in the Water Quality Management Plans, this period has been approximated by the inclusive months. Where applicable in a waste discharge permit, the Low Flow Period may be further defined.

P. "Secondary Treatment as the following context may require for:

1. "Sewage wastes" means the minimum level of treatment mandated by EPA regulations pursuant to Public Law 92-500.

2. "Industrial and other waste sources" imply control equivalent to Best Practicable Treatment (BPT).

Pennsylvania³⁸

Ambient stream concentration - The range in concentration or level of a water quality parameter which would be expected to occur in the absence of human activities. The value is normally determined from quality measurements of waters that are not affected by waste discharges or other human activities.

Ambient temperature - The temperature of the water body upstream or outside of the influence of a heated waste discharge or waste discharge complex. The ambient temperature sampling point should be unaffected by any sources of waste heat.

Application factor - The ratio of the safe concentration to the 96-hour LC50 concentration which is assumed to be constant for related groups of chemicals and is multiplied by an LC50 value in order to produce the estimated safe concentration of a pollutant necessary to protect the balanced indigenous community in the receiving body of water.

Balanced indigenous aquatic community - A group of populations occupying a common area which consists of desirable species of fish, shellfish, and other wildlife, including the biota of other trophic levels which are necessary as part of the food chain or otherwise ecologically important to the maintenance of these populations.

Carcinogenic - Producing cancer.

Clean Streams Law - The Clean Streams Law (35 P.S. ss 691.1-691.1001).

Clean Water Act - 33 U.S.C. ss 1251 et seq.

Cumulative pollutant - A pollutant which is measurably increased in concentration within aquatic organisms relative to concentrations in the receiving waters.

Daily average - the arithmetic average of all determinations made during a calendar month.

Daily determination - The arithmetic average of all determinations made during a 24-hour period.

Department - The Department of Environmental Resources of the Commonwealth.

Effluent limits - Any restriction established by the Department on quantities, rates, and concentrations of pollutants which are discharged into the waters of this Commonwealth.

Epilimnion - Warm upper layer of nearly uniform temperature in a stratified body of water, such as a lake or impoundment.

Existing potable water supply - A source of water supply which is presently being used by humans after

conventional treatment for drinking, culinary and other purposes, such as inclusion in food products.

Existing sensitive industrial water supply - An existing industrial water supply use which would require installation of additional water treatment by the industrial user in the event that the total dissolved solids concentration instream exceeds 500 mg/l as a monthly average and 750 mg/l at any one time.

LC50 value - The concentration of a pollutant in test waters that is lethal to 50% of the test organisms during continuous exposure for a specified period of time.

Maximum allowable daily load (MDL) - The maximum amount of a pollutant from point and nonpoint sources which the receiving waters can assimilate at the accepted design stream flow without endangering the achievement of water quality standards.

Mutagenic - Producing adverse changes in the genes.

Noncumulative pollutant - A pollutant which is not measurably increased in concentration within aquatic organisms relative to concentrations in the receiving waters.

Osmotic pressure - The pressure which, when applied to a solution, will just prevent the passage of solvent - usually water - from an area of low solute concentration through a semipermeable membrane to an area of high solute concentration.

Representative important species - Those species of aquatic life whose protection and propagation will assure the sustained presence of a balanced indigenous community. Such species are representative in the sense that maintenance of water quality criteria will assure both the natural completion of the species' life cycles and the overall protection and sustained propagation of the balanced indigenous community.

Self concentration value - An estimated pollutant concentration as may be determined by the Department from relevant aquatic field studies, substantial available scientific literature, or bioassay tests tailored to the ambient quality of the receiving waters which will allow the survival of representative important species that have been chronically exposed to the concentration in the receiving waters.

State water plan - The reports, studies, inventories and plans prepared by the Department to guide the

conservation, development and administration of the Commonwealth's water and related land resources as authorized by 71 P ss 510-4.

Tetratogenic - Producing monstrosities, malformations, or extreme deviations from the normal structure of life forms.

Testwater - A receiving water directly upstream from a waste discharge which is relatively unaffected by human activities, or a reconstituted water which approximates the ambient chemical characteristics of these receiving waters.

Water-quality-based effluent limitations - An effluent limitation based on the need to attain or maintain specific water quality criteria in order to assure protection of a designated use.

Water quality criteria - Levels of parameters or stream conditions that need to be maintained or attained to prevent or eliminate pollution.

Water quality standards - The combination of water uses to be protected and the water quality criteria necessary to protect those uses.

Rhode Island³⁹

"administrator" shall mean the administrator of the United States Environmental Protection Agency or his designee.

"bypass" shall mean the intentional diversion of wastes from any portion of a Wastewater Treatment Facility.

"cause" shall mean cause, suffer, or allow.

"CWA" shall mean the Federal Clean Water Act (formerly referred to as the Federal Water Pollution Control Act, Pub. L. 92-500, as amended by Pub. L. 95-217 and Pub. L. 95-576, 33 U.S.C. 1251 et seq.

"depuration" shall mean the transplantation or artificial holding of shellfish for purification purposes.

"director" shall mean the director of the department of environmental management or any subordinate or subordinates to whom he has delegated the powers and duties vested in him by these regulations.

"discharge" shall mean cause sewage or other waste, unless a more specific waste is indicated, to be discharged, deposited, dumped, spilled or leaked into

any waters of the State or to be placed in a location where the director determines it is likely to enter any waters of the State.

"effluent limited waters" shall be as defined in paragraph 9.011 of these regulations.

"effluent limitations" shall mean any restriction imposed by these regulations or the director pursuant to these regulations on quality, rates and concentrations of pollutants which are discharged from point sources into any waters of the State.

"EPA" shall mean the United States Environmental Protection Agency.

"ESB" shall mean the Environmental Standards Board established by Chapter 42-17.3 of the General laws of Rhode Island of 1956, as amended.

"fresh water" shall mean those waters of the State which are not sea water.

"hazardous waste" shall be defined pursuant to Chapter 23-46.2 of the General Laws of Rhode Island of 1956, as amended, and regulations adopted pursuant thereunder.

"high quality waters" shall mean water whose quality is higher than the water quality criteria for the water's designated class, but which does not meet all the water quality criteria for a higher class.

"low quality waters" shall mean waters which do not meet their designated water quality standards.

"margin of safety" shall mean a requirement in addition to specific requirements of these regulations which the director deems necessary to protect the public health and safety and the environment.

"marina" shall mean any facility, public or private, at which vessels are docked or moored.

"new discharges" shall mean discharges for which the director had not issued an order of approval on or before the effective date of these regulations.

"NPDES" or National Pollutant Discharge Elimination System shall mean the national program for issuing, modifying, revoking and reissuing, terminating, monitoring, and enforcing permits pursuant to Sections 402, 318, and 405 of the Clean Water Act.

"other waste" shall mean chemicals, acids, dye-stuff, starch, coloring matter, oil and tar, radio-active substances, and any compound, solution, mixture of product thereof, and every substance which may be injurious to public health or comfort, or which would injuriously affect the natural and healthy propagation, growth, or development of any fish or shellfish in any waters of the State, or the nourishment of the same, or which would injuriously affect the flavor taste, or value as food of any such fish or shellfish; or which would defile said waters or injure or defile any vessel, boat, wharf, pier, or any public or private property upon, in or under said waters, or any shore thereof.

"person" shall mean an individual, trust, firm, joint stock company, corporation (including a government corporation), partnership, association, state, municipality, commission, political subdivision of a state, or any interstate body.

"pollution" shall mean the entrance or discharge of sewage or other waste into any of the waters of the State in such quantity, either by itself or in connection with other sewage or other waste so discharged, as to alter the physical or chemical properties, or biology, of said waters, including change in temperature, taste, color, turbidity or odor, and to cause or be likely to cause damage to the public, or to any person having a right to use said waters for boating, fishing or other purposes, or owning property in, under or bordering upon the same.

"POTW" or Publicly Owned Treatment Works shall mean a treatment works which is owned by the State or a municipality, or other public authority.

"schedule of compliance" shall mean a schedule of remedial measures including an enforceable sequence of interim requirements leading to compliance with applicable water quality standards, effluent limitations, or orders of the director.

"sea water" shall mean those waters subject to the rise and fall of the tide.

"severe property damage" shall mean substantial physical damage to property, damage to the treatment facilities which would cause them to become inoperable or substantial and permanent loss of natural resources which can reasonably be expected to occur in the absence of a bypass. Severe property damage does not mean economic loss caused by delays in production.

"sewage" shall mean any human or animal excremental liquid or substance, any decomposed animal or vegetable matter, garbage, offal, filth, or waste.

"storm water sewer" shall mean a conveyance or system of conveyances (including, but not limited to pipes, conduits, ditches, and channels) primarily used for collecting and conveying storm water runoff

"surface water degradation; degradation" shall mean reduction in attained or attainable levels of one or more water quality criteria.

"system or means of wastewater treatment" or "treatment works" shall mean any method, devices or system for preventing, abating, reducing, storing, treating, separating, recycling, reclaiming or disposing of sewage or other waste, including storm water runoff and sewage or other waste in combined storm water and sanitary sewer systems.

"treatment works" include intercepting sewers, outfall sewers, sewage collection systems and the land that will be an integral part of the treatment process (including land use for the storage of treated wastewater in land treatment systems prior to land application) or is used for ultimate disposal of residue resulting from such treatment.

Wastewater Treatment Facilities include pumping, power, and other equipment and their appurtenances, and elements essential to provide a reliable recycled supply such as standby treatment units and clear well facilities.

"water quality limited waters" shall be as defined in paragraph 9.012 of these regulations.

"waters of the State" or "Waters" shall mean all surface waters of the State of Rhode Island, including all tidewaters within the State and all inland waters of any river, stream, brook, pond or lake.

South Carolina⁴⁰

The definition of any word or phrase employed in Section C., D., or E. of this regulation shall be the same as given in the South Carolina Pollution Control Act, 48-1-10, et seq., S.C. Code of Laws, 1976 hereafter referred to as the Act. Words or phrases which are not defined in the Act are defined as follows:

- (1) Agricultural includes use of water for stock watering irrigation, and other farm purposes.

- (2) Aquifer means a geologic formation, group of formations, or part of a formation that contains sufficient saturated permeable material to yield significant quantities of ground water to wells or springs.
- (3) Best management practice (BMP) means a practice or combination of practices that are the most effective, practical ways of controlling or abating nonpoint source pollution.
- (4) Buffer zones means areas in Class SA waters where the gathering of clams, mussels, or oysters is prohibited due to potential public health safety problems.
- (5) Classified uses means those uses specified in Section E. of this regulation as applied to specific waters, whether or not those uses are being attained.
- (6) Conventional treatment as applying to potable water supplies means treatment including at least flocculation, sedimentation, filtration, and disinfection.
- (7) Daily average, as used in this regulation, means the average of all samples taken during any 24-hour period.
- (8) Deleterious substances means those substances which in sufficient concentrations or levels have a harmful effect on water uses.
- (9) Ephemeral Streams means streams that flow only in direct response to rainfall or snowmelt and in which discrete periods of flow persist no more than 29 consecutive days per event.

- (10) Existing uses means those uses actually being attained in or on the water, on or after November 28, 1975, regardless of the classified uses.
- (11) Fishing means the taking, harvesting, or catching of fish or shellfish for human consumption.
- (12) Ground water means water below the land surface in a zone of saturation.
- (13) Intermittent Streams means streams that generally have defined natural watercourses which do not flow year round, but flow beyond periods of rainfall or snowmelt.
- (14) Median tolerance limit means the concentration of a test material at which just 50 percent of the test animals are able to survive under test conditions for a specified period of exposure.
- (15) Mixing zone means:
- (a) for surface waters, a region of water below an outlet where the physical mixing of a discharge occurs in all directions until the constituents in the discharge have achieved uniform concentrations in the receiving water, and
 - (b) for ground waters, a hydrogeologically controlled three-dimensional flow path within an aquifer which constitutes the pathway for waste constituents to migrate from a source.
- (16) Natural conditions means those water quality conditions unaffected by point and nonpoint sources or other sources of pollution.
- (17) Outstanding recreational or ecological resource waters means waters which are of exceptional recreational or ecological importance. Such waters may include, but are not limited to: waters in national or state parks or wildlife refuges; waters supporting threatened or endangered species; waters under the National Wild and Scenic Rivers Act or South Carolina Scenic Rivers Act; waters known to be significant nursery areas for commercially important species or known to contain significant commercial or public shell-fish

resources; or waters used for or having significant value for scientific research and study. Such waters may be protected using Classes AA or SAA.

- (18) Primary contact recreation means any activity with the intended purpose of direct water contact by the human body to the point of complete submergence, including but not limited to swimming, water skiing, and skin diving.
- (19) Propagation means the continuance of species by reproduction in the natural environment, as opposed to the maintenance of species by artificial culture and stocking.
- (20) Public water system means any public or privately owned waterworks system which provides drinking water for human consumption, except those serving a single private residence or dwelling.
- (21) Recharge area means an area where an aquifer is poorly confined, is under water table conditions, and has a downward component of flow near the water table.
- (22) Secondary contact recreation means any activity occurring on or near the water which does not have an intended purpose of direct water contact by the human body to the point of complete submergence, including but not limited to fishing, boating, canoeing, and wading.
- (23) Source for drinking water supply means any source of surface water which is used for domestic consumption, or used in connection with the processing of milk, beverages, food, or for other purposes which requires finished water meeting regulations [40 CFR Part 141 and 40 CFR Part 143] established pursuant to the Safe Drinking Water Act (Public Law 93-523, 95-190) applicable to public water systems.
- (24) Tidal saltwaters means those waters whose elevation is subject to changes due to oceanic tides and which have chloride ion content in excess of 250 milligrams per liter (mg/l) (salinity = 0.48 o/oo).
- (25) Toxic wastes means those wastes or combinations of wastes including disease-causing agents which, after discharge and upon exposure, ingestion, inhalation, or assimilation into any

organism, either directly from the environment or directly by ingestion through food chains, may cause death, disease, behavioral abnormalities, cancer, genetic mutations, physiological malfunctions (including malfunctions in reproduction), physical deformations, or restrict or impair growth in such organisms or their offspring.

(26) Underground source of drinking water (USDW) means an aquifer or its portion:

- 1) Which supplies any public water system; or
- 2) Which contains a sufficient quantity of ground water to supply a public water system; and,

(a) Currently supplies drinking water for human consumption; or

(b) Contains water with fewer than ten thousand milligrams per liter total dissolved solids.

(27) Water table means that level below the land surface at which all the voids are filled with water at a pressure equal to atmospheric.

(28) Weekly average means the average of all samples taken during any consecutive seven-day period.

South Dakota⁴¹

(1) "Administrator" the administrator of the U.S. Environmental Protection Agency:

(1A) "Ammonia Toxicity," Ammonia Toxicity by William T. Willingham, Control Technology Branch, Water Division, U.S. Environmental Protection Agency, Region VII, (February, 1976) 4

(2) Bioassay test any test in which organisms are used to detect or measure the presence or effect of one or more substances or conditions

(3) "Degree C" degrees centigrade, a measure of temperature

(4) "Cold water marginal fish life propagation" a type of beneficial use assigned to waters which are suitable for supporting stockings of catchable size trout during portions of the year, but due to low flows, siltation, and warm temperature, are not suitable for permanent cold water fish population

(5) "Cold water permanent fish life propagation" a type of beneficial use assigned to waters which are capable of supporting a permanent trout fishery from natural reproduction of fingerling stocking

(6) "Commerce and industry" a type of beneficial use assigned to waters which are suitable for use as cooling water, industrial process water, navigation, and production of hydroelectric power

(7) "Criteria" a numerical value which defines the acceptable limits of a parameter

(8) "Domestic water supply" a type of beneficial use assigned to waters which are suitable for human consumption, culinary or food processing purposes, and other household purposes after suitable treatment by conventional processes

(9) "Eight hour composited sample" a sample composed of eight grab samples taken at one hour intervals, the volume of each sample proportioned to flow, and physically mixed prior to analysis

(10) "E.P.A. methods" Methods for Chemical Analysis of Waters and Wastes, 1971, Environmental Protection Agency, analytical quality control laboratory

(11) "Degrees F" degrees Fahrenheit, a measure of temperature

(12) "Handbook 69" Maximum Permissible Body Burdens and Maximum Permissible Concentrations of Radionuclides in Air and in Water for Occupational Exposure, recommendations of the national committee on radiation protection. National Bureau of Standards handbook 69 (August 1963)

(13) "Immersion recreation" a beneficial use assigned to waters which are suitable for uses where the human body may come in direct contact with the water, to the point of complete submersion and where water may be ingested accidentally or certain sensitive organs such as the eyes, ears, and nose may be exposed to it

(14) "Irrigation" a beneficial use assigned to waters which are suitable for irrigating farm lands, ranch lands, gardens and recreational areas

(15) "J.C.U.," jackson candle unit, a measure of turbidity

(16) "Lake" a navigable lake, pond, or reservoir, created by either natural or artificial means, for which there exists a right of public access or use;

(17) "Limited contact recreation" a beneficial use assigned waters which are suitable for boating, fishing and other water related recreation other than immersion recreation

(18) "Median tolerance limit" the concentration of a toxic material or materials which kills fifty percent of bioassay test organisms in ninety-six hours

(19) "M.F." membrane filter, a term used to signify that the number of bacteria was determined by means of the membrane filter technique

(20) "mg/l" milligrams per liter, a measure of concentration

(21) "micromhos/cm" micromhos per centimeter, a measure of electrical conductivity

(22) "Mixing zone" that volume of water immediately surrounding a discharge which does not meet water quality criteria because of a lack of mixing of the discharge and stream or lake waters

(23) "MPN" most probably number, a term used to signify that the number of bacteria was determined by means of the multiple-tube fermentation technique

(24) "Parameter" a chemical, physical or biological characteristic which affects the use of the water

(25) "PCi/l" picocuries per liter, a measure of radioactive concentration

(26) "Secretary" the secretary of the South Dakota Department of Environmental Protection

(27) "Segment" a continuous stretch of water found between two points in the bed of a stream

(28) "Spawning bed" any place where fish spawn

(29) "Standard Methods" Standard Methods for the Examination of Water and Wastewater, Fourteenth edition, American Public Health Association et al. (1975)

(30) "Stream" a navigable river, creek, or tributary of such river or creek

(31) "Twenty-four hour composited sample" a sample composed of twenty-four grab samples taken at one hour intervals, the volume of each sample proportioned to flow, and physically mixed prior to analysis

(32) "Warm water marginal fish life propagation" a beneficial use assigned to lakes and streams which will support more tolerant species of fish with frequent stocking and intensive management but suffer frequent fish kills because of critical natural conditions

(33) "Warm water permanent fish life propagation" a beneficial use assigned to lakes and streams which are suitable for the permanent maintenance of warm water fish including walleyes, black bass, perch, channel catfish, northern pike, and bluegills

(34) "Warm water semipermanent fish life propagation waters" a beneficial use assigned to lakes and streams which are suitable for the maintenance of warm water fish but which suffer occasional fish kills because of critical natural conditions. Species found in these waters includes walleyes, perch, black bass, northern pike, and channel catfish

(35) "Wildlife propagation and stock watering" a beneficial use assigned to streams and lakes which are satisfactory as habitat for aquatic and semi-aquatic wild animals and fowl and are of suitable quality for watering domestic and wild animals

Tennessee⁴²

(1) Conventional Water Treatment - Conventional water treatment as referred to in the criteria denotes coagulation, sedimentation, filtration or chlorination.

(2) Mixing Zone - Mixing zone refers to that section of a flowing stream or impounded waters in the immediate vicinity of an outfall where an effluent becomes dispersed and mixed. Such zones shall be restricted in area and length and shall not (i) prevent the free passage of fish or cause aquatic life mortality in the receiving waters; (ii) contain materials in concentrations that exceed recognized acute toxicity levels for biota significant to the aquatic community in the receiving waters; (iii) result in offensive conditions; (iv) produce undesirable aquatic life or result in dominance of a nuisance species; (v) endanger the public health or welfare; or (vi) adversely affect the reasonable and necessary uses of the area; (vii) create a condition of chronic toxicity beyond the edge of the mixing

zone; and (viii) adversely affect nursery and spawning areas.

(3) Wet Weather Conveyance - Wet weather conveyances are natural watercourses, including natural watercourses that have been modified by channelization, that flow only in direct response to precipitation in their immediate locality and whose channels are above the groundwater table and which do not support fish or aquatic life and are not suitable for drinking water supplies. Statutory Authority: T.C.A. Section 4-5-202, T.C.A. Section 69-3-105.

(4) Terminology not specifically defined herein shall be defined in accordance with the Tennessee Water Quality Control Act, (T.C.A. Sections 69-3-101, et seq.).

Texas⁴³

§307.3. DEFINITIONS AND ABBREVIATIONS.

(1) Acute toxicity - Toxicity which exerts short-term lethal impacts on representative, sensitive organisms. The duration of exposure applicable to acute toxicity is normally 96 hours or less. (Direct thermal impacts are excluded from definitions of toxicity).

(2) Ambient - The natural conditions that would be expected to occur in waters unaffected or not influenced by the activities of man.

(3) Best management practice - A practice or combination of practices determined to be the most practicable means of preventing or reducing, to a level compatible with water quality goals, the amount of pollution generated by nonpoint sources.

(4) Bioaccumulative toxic - A toxic substance which has a tendency to accumulate in organisms.

(5) Chronic toxicity - Toxicity which exerts sub-lethal negative effects such as growth impairment and reduced reproduction, or which exerts lethality after long-term exposure, on representative, sensitive organisms.

(6) Commission - The Texas Water Commission.

(7) Contact recreation - Recreational activities involving a significant risk of ingestion of water, including wading by children, swimming, water skiing, diving, and surfing.

(8) Continuing planning process - A document that describes the state's planning and management process and procedures for making water quality decisions required by §303(e) of the Clean Water Act (33 United States Code 1313).

(9) Criteria - Water quality conditions which are to be met in order to support and protect desired uses.

(10) Critical low-flow - Low-flow condition (e.g., 7Q2 flow) below which some standards do not apply. The impacts of permitted discharges are analyzed at critical low-flow.

(11) Discharge permit - A permit issued by the state to discharge effluent into waters of the state.

(12) EC50 - The concentration of a toxicant that produces sub-lethal impacts on 50% of the organisms tested in a specified time period.

(13) Effluent - Wastewater discharged from any point source prior to entering a water body.

(14) Epilimnion - The upper mixed layer of a lake (including impoundments, ponds, and reservoirs).

(15) Fecal coliform - That portion of the coliform bacteria group which is present in the intestinal tracts and feces of warm-blooded animals.

(16) Freshwaters - Inland waters which exhibit no measurable elevation changes due to normal tides.

(17) Halocline - A vertical gradient in salinity under conditions of density stratification that is usually recognized as the point where salinity exhibits the greatest difference in the vertical direction.

(18) Intermittent stream - A stream which has a period of zero flow for at least one week during most years. Where flow records are available, a stream with a 7Q2 flow of less than 0.1 fts/s is considered intermittent. Streams with perennial pools which create significant aquatic life uses are not intermittent.

(19) LC50 - The concentration of a toxicant that is lethal (fatal) to 50% of the organisms tested in a specified time period.

(20) Marine waters - Waters which have measurable elevation changes due to normal tides. Marine waters

are considered to be saltwater for purposes of standards application.

(21) Mixing zone - The area contiguous to a discharge where mixing with receiving waters takes place and which may not meet certain criteria applicable to the receiving water.

(22) Noncontact recreation - Recreational pursuits not involving a significant risk of water ingestion, including fishing, commercial and recreational boating, and limited body contact incidental to shoreline activity.

(23) Nonpersistent toxic - A toxic substance that readily degrades in the aquatic environment, exhibits a half-life of less than 96 hours, and does not have a tendency to accumulate in organisms.

(24) Oyster waters - Waters producing edible species of clams, oysters, or mussels.

(25) Persistent toxic - A toxic substance that is not readily degraded and exhibits a half-life of 96 hours or more in an aquatic environment.

(26) Practical quantitation level - The lowest concentration at which a particular substance can be measured by approved laboratory methods.

(27) Salinity - The total dissolved solids in water after all carbonates have been converted to oxides, all bromide and iodide have been replaced by chloride, and all organic matter has been oxidized. For most purposes, salinity is considered equivalent to total dissolved salt content. Salinity is normally expressed in parts per thousand.

(28) Settleable solids - The volume or weight of material which will settle out of a water sample in a specified period of time.

(29) Seven-day, two-year low flow - The lowest flow that occurs for seven consecutive days during a two-year period as statistically determined from historical data. It is the flow used for determining the allowable discharge load to a stream.

(30) Shellfish - Clams, oysters, mussels, crabs, crayfish, lobsters, and shrimp.

(31) Standards - The designation of water bodies for desirable uses and the narrative and numerical criteria deemed necessary to protect those uses.

(32) Total dissolved solids - The amount of material (inorganic salts and small amounts of organic material) dissolved in water and commonly expressed as a concentration in terms of milligrams per liter. The term is equivalent to the term filterable residue, as used in the publication entitled, Standard Methods for the Examination of Water and Wastewater.

(33) Total suspended solids - Total suspended matter in water, which is equivalent to nonfilterable residue.

(34) Total toxicity - Toxicity as determined by exposing aquatic organisms to samples or dilutions of instream water or treated effluent. Also referred to as whole-effluent toxicity.

(35) Toxicity - The occurrence of lethal or sublethal adverse effects on representative, sensitive organisms due to exposure to toxic materials. Adverse effects caused by conditions of temperature, dissolved oxygen, or nontoxic dissolved substances are excluded from the definition of toxicity.

(36) Toxicity biomonitoring - The determination of total toxicity.

(37) Water quality management program - The commission's overall program for attaining and maintaining water quality consistent with state standards, as authorized under the Texas Water Code, the Texas Administrative Code, and the Clean Water Act, §§106, 205(j), 208, 303(e) and 314 (33 United States Code 1251 et seq).

(38) Zone of initial dilution - The small area at the immediate point of discharge where initial dilution with receiving waters occurs, and which may not meet certain criteria applicable to the receiving water. A zone of initial dilution is substantially smaller than a mixing zone.

(b) Abbreviations. The following abbreviations apply to this chapter:

- (1) AP - aquifer protection.
- (2) BMP - best management practices.
- (3) AS - agricultural water supply.
- (4) CFR - Code of Federal Regulations.
- (5) CR - contact recreation.
- (6) CPP - continuing planning process.
- (7) DO - dissolved oxygen.
- (8) E - exceptional quality aquatic habitat.
- (9) EPA - U.S. Environmental Protection Agency.

- (10) °F - degree(s) Fahrenheit.
- (11) fts/s - cubic feet per second.
- (12) H - high quality aquatic habitat.
- (13) I - intermediate quality aquatic habitat.
- (14) IS - industrial water supply.
- (15) L - limited quality aquatic habitat.
- (16) mg/L - milligrams per liter
- (17) ml - milliliter.
- (18) N - navigation.
- (19) NCR - noncontact recreation.
- (20) NPDES - National Pollutant Discharge Elimination System, as set out in the Clean Water Act, §402
- (33 United States Code 1342).
- (21) O - Oyster waters.
- (22) PQL - practical quantitation level.
- (23) PS - public water supply.
- (24) 7Q2 - seven-day, two-year low flow.
- (25) TDS - total dissolved solids.
- (26) USGS - U.S. Geological Survey.
- (27) WQM - water quality management.

Utah⁴⁴

Vermont⁴⁵

Not Specified

For the purposes of these Water Quality Standards, the terms below shall have the following meanings unless a different meaning clearly appears from the context.

1. Accepted agricultural or silvicultural practices means those practices as defined by the commissioners of agriculture and forests, parks and recreation respectively in accordance with 10 V.S.A. §1259(f) as being necessary to protect water quality in a manner consistent with the Act.

2. Act means the "Vermont Water Pollution Control Act," 10 V.S.A., Chapter 47.

3. Applicable water quality criteria means all criteria specified in sections 3-01, 3-05, 3-06 as well as those specified in sections 3-02(B), 3-03(B) and 3-04(B) which are applicable to the classification of the waters in question.

4. Assimilative capacity means a measure of the capacity of the receiving waters to assimilate wastes without lowering their quality below the applicable-water quality criteria.

5. Background conditions means conditions which exist in the absence of human or cultural influences or conditions due to human or cultural influences which are not subject to regulation under the Act.

6. Beneficial values or uses means any value or use whether existing or not, which is specified in the management objectives for each class of water as set forth in sections 3-02(A), 3-03(A) and 3-04(A) of these rules.

7. Board means the Vermont Water Resources Board, 10 V.S.A. §1251(1).

8. Classification means the water quality classification designated for a specific body of water in accordance with the provisions of 10 V.S.A. §1253.

9. Discharge means the placing, depositing, or emission of any wastes, directly or indirectly, into an injection well or into the waters of the state, 10 V.S.A. §1251(2).

10. EPA means the U.S. Environmental Protection Agency.

11. Existing Discharge means any discharge to the extent authorized by a valid permit issued under the provisions of 10 V.S.A. §1263 or §1265 as of January 7, 1985.

12. Existing Use means any beneficial use of water which provides important economic, social or other public benefits and which has occurred on a frequent, regular or consistent basis and any other use made of the water which is compatible with its classification.

13. Groundwater means water below the land surface, 10 V.S.A. §1410 (b)(1).

14. Indirect discharge means any discharge to groundwater, whether subsurface, land-based or otherwise, 10 V.S.A. §1251(15).

15. Mixing zone means a length or area within the waters of the state required for the dispersion and dilution of waste discharges adequately treated to meet federal and state treatment requirements and within which it is recognized that specific water uses or water quality criteria associated with the assigned classification for such waters may not be realized. The mixing zone shall not extend more than 200 feet from the point of discharge, 10 V.S.A. §1251(6).

16. New discharge means any discharge not authorized under the provisions of 10 V.S.A. §1263 as of January 7, 1985 or any increased pollutant loading or demand

on the assimilative capacity of the receiving waters from an existing discharge which requires the issuance of a new or amended permit.

17. Nonpoint source waste means waste which reaches the waters of the state via direct or indirect discharge in a diffuse manner from sources including, but not limited to, overland runoff from construction sites, or as a result of agricultural or silvicultural practices.

18. Nonpolluting waste means those wastes which prior to treatment do not have the potential to result in an undue adverse effect on any existing use, beneficial value or use, or the quality of the receiving waters.

19. Permit means a Discharge Permit issued in accordance with the provisions of 10 V.S.A. §1263.

20. Person means an individual, partnership, public or private corporation, municipality, institution, or agency of the state or federal government, including any officer or governing or managing body of a partnership, association, firm or corporation, 10 V.S.A. §1251(8).

21. Public Interest means that which shall be for the greatest benefit to the people of the state as determined by the Board in accordance with the criteria set forth in subsection (e) of section 1253 of the Act.

22. Publicly owned treatment works (POTW) means any government owned device or system used in the storage, treatment, disposal or recycling of wastes.

23. Receiving waters means all waters adjacent to a discharge and all adjacent or downstream waters whose quality may be affected by that discharge.

24. Seven Day Low Flow, Ten Year Return Period (7Q10) means that instantaneous flow which is equal to the lowest mean flow for seven consecutive days which has a 10% chance of occurring in any given year.

25. Secretary means the Secretary of the Agency of Environmental Conservation or his authorized representative, 10 V.S.A. §1251 (11).

26. Stormwater runoff means natural precipitation which does not infiltrate into the soil, including any material dissolved or suspended in such water. Stormwater runoff does not include wastes from combined sewer overflows.

27. Toxic wastes means those wastes or combinations of wastes which, after discharge and upon exposure, ingestion, inhalation, or assimilation into any organism, either directly from the environment or indirectly by ingestion through food chains, will, on the basis of available information cause death, disease, behavioral abnormalities, cancer genetic mutations, physiological or reproductive malfunctions or physical deformations in such organisms or their offspring.

28. Undue Adverse Effect - This phrase shall have its common meaning. In determining undue adverse effect, the Secretary is authorized to make case specific judgments in applying these rules. In making such judgments, the water quality policy set forth in section 1-02, the classification of the waters and any other applicable provisions of these rules shall be considered. Except where the context clearly indicates otherwise, applications or interpretations which are less stringent than the specific provisions of these rules shall not be allowed.

29. Waste means effluent, sewage, or any substance or material, liquid, gaseous, solid or radioactive, including heated liquids, whether or not harmful or deleterious to waters, 10 V.S.A. §1251(12).

30. Waters and Waters of the State means any river, stream, creek, brook, reservoir, pond, lake, spring, and any body of surface water, artificial or natural, which is contained within, flows through or borders upon the State of Vermont or any portion thereof, 10 V.S.A. §1251(13).

Virginia⁴³

Washington⁴⁴

Not Specified

(1) Background Conditions: The biological, chemical, and physical conditions of a water body, upstream from the point on nonpoint source of any discharge under consideration. Background sampling location in an enforcement action would be upstream from other inflows. If several discharges to any water body exist, and enforcement action is being taken for possible violations to the standards, background sampling would be undertaken immediately upstream from each discharge

(2) Fecal Coliform: That portion of the coliform group which is present in the intestinal tracts and feces of warm-blooded animals as detected by the product of acid or gas from lactose in suitable

culture medium within 24 hours at 44.5 degrees plus or minus 0.2 degrees C.

(3) Mean Detention Time: The time obtained by dividing a reservoir's mean annual minimum total storage by the 30-day ten-year-flow from the reservoir.

(4) Median Value: That value of a group of measurements that falls in the middle when the measurements are arranged in order of magnitude. If the number of measurements is even, the median value would be the value half-way between the two middle measurements.

(5) Permit: A document issued pursuant to RCW 90.48.160 et seq. or RCW 90.48.260 or both, specifying the waste treatment and control requirements and waste discharge conditions.

(6) pH: The negative logarithm of the hydrogen ion concentration.

(7) Surface Waters of the State: Include lakes, rivers, ponds, streams, inland waters, saltwaters, and all other surface waters and water courses within the jurisdiction of the state of Washington.

(8) Temperature: Temperature expressed in degrees Celsius.

(9) Turbidity: The clarity of water expressed as nephelometric turbidity units (NTU) and measured with a calibrated turbidimeter.

(10) Upwelling: Upwelling is a direct result of wind stress on the sea surface. As winds blow parallel to a coast, the net flow of water is at an angle of about 45° toward the sea. This flow causes cold bottom water to move upward to replace the warmer surface water moving offshore. The cold water is rich in dissolved nutrients and has a low dissolved oxygen content.

West Virginia⁴⁸

WQS
LEG. RULE, 20-5 & 20-5A
SERIES I, SEC. 2.1

2.1 "Conventional treatment" is the treatment of water as approved by the State Health Department to assure that the Water is safe for human consumption.

2.2 "Cumulative" means a pollutant which increases in concentration in an organism by successive additions at different times or in different ways

(bio-accumulation).

2.3 The "Federal Act" means the Clean Water Act (also known as the Federal Water Pollution Control Act) Public Law 92-500, as amended by Public Law 95-217, 33 U.S.C. 1251, et seq.

2.4 "High quality waters" are those waters whose quality is equal to or better than the minimum levels necessary to achieve the national water quality goal uses. Included are those streams or stream segments which receive annual stockings of trout, but which do not support year-round trout populations.

2.5 "Intermittent streams" are streams which have no flow during sustained period of no precipitation and which do not support aquatic life whose life history requires residence in flowing waters for a continuous period of at least six (6) months.

2.6 "National resource waters" are those whose unique character, ecological or recreational value or pristine nature constitutes a valuable national or State resource. (See Section 7.3).

2.7 "Natural" or "naturally occurring" values or "natural temperature" shall mean for all of the waters of the State:

2.7.a Those water quality values which exist unaffected by--or unaffected as a consequence of--any water use by any person; and

2.7.b Those water quality values which exist unaffected by the discharge, or direct or indirect deposit of, any solid, liquid or gaseous substance by any person.

2.8 "Non-point source" shall mean any source other than a point source from which pollutants may reach the waters of the State.

2.9 "Persistent" shall mean a pollutant and its transformation products which under natural conditions degrades slowly in an aquatic environment.

2.10 "Point source" shall mean any discernible, confined and discrete conveyance, including, but not limited to any pipe, ditch, channel, tunnel, conduit, well, discrete fissure, container, rolling stock, or vessel or other floating craft, from which pollutants are or may be discharged.

2.11 "Representative important species of aquatic

life" shall mean those species of aquatic life whose protection and propagation will assure the sustained presence of a balanced aquatic community. Such species are representative in the sense that maintenance of water quality criteria will assure both the natural completion of the species' life cycles and the overall protection and sustained propagation of the balanced aquatic community.

2.12 The "State Act" or "State Law" shall mean the West Virginia Water Pollution Control Act, West Virginia Code 20-5A-1, et seq.

2.13 "Total recoverable" refers to the digestion procedure for certain heavy metals as referenced in 40 CFR 136, October 26, 1984, Guidelines Establishing Test Procedures for the Analysis of Pollutants Under the Clean Water Act.

2.14 "Trout waters" are streams or stream segments which sustain year-round trout populations. Excluded are those streams or stream segments which receive annual stockings of trout, but which do not support year-round trout populations.

2.15 "Water quality criteria" shall mean levels of parameters or stream conditions that are required to be maintained by these regulations. Criteria may be expressed as a constituent concentration, levels, or narrative statement, representing a quality of water that supports a designated use or uses.

2.16 "Water quality standards" means the combination of water uses to be protected and the water quality criteria to be maintained by these rules.

2.17 "Wet weather streams" are streams that flow only in direct response to precipitation or whose channels are at all times above the water table.

Wisconsin⁴⁹

(1) "Mean tolerance level (TLM)" means the concentration of a substance at which there is a 50 percent mortality rate of bioassay test organisms in a stated exposure time.

(2) "Mixing Zone" means a region in which a discharge of different characteristics than the receiving water is in transit and progressively diluted from the source to the receiving system.

(3) "Natural conditions" means the normal daily and seasonal variations in climatic and atmospheric conditions, and the existing physical and chemical

characteristics of a water or the course in which it flows.

(4) "Natural temperature" means the normal existing temperature of a surface water including daily and seasonal changes outside the zone of influence of any artificial inputs.

(5) "Resource management" means the application of control techniques to enhance or preserve a surface water in accordance with statutory provisions and in the general public interest.

(6) "Sanitary survey" means a thorough investigation and evaluation of a surface water including bacteriological sampling to determine the extent and cause of any bacterial contamination.

(7) "Surface waters" means all natural and artificial named and unnamed lakes and all naturally flowing streams within the boundaries of the state, but not including cooling lakes, farm ponds and facilities constructed for the treatment of wastewaters (the term waters as used in this chapter means surface waters).

(8) "Unauthorized concentrations of substances" mean pollutants or other chemicals introduced into surface waters without prior permit or knowledge of the department, but not including accidental or unintentional spills.

(9) "Best practicable control technology" means that level of treatment established by the department under section 147.04 (2)(a), Wis. Stats., for categories and classes of point sources to be achieved by not later than July 1, 1977.

(10) "Best available control technology" means that level of treatment established by the department under section 147.04 (2)(b)(1), Wis. Stats., for categories and classes of point sources to be achieved by not later than July 1, 1983.

Wyoming⁵⁰

a. Best Management Practices - Those practices or combinations of practices which are determined by the Wyoming Continuing Planning Process, after problem assessment, examination of alternative practices and appropriate public participation, to the most practically effective (including technological, economic and institutional considerations) means of preventing or reducing the quantity or concentration of wastes discharged to surface waters of the State.

Best management practices are contained within a State certified water quality management plan adopted under Section 208 of the Federal Act in accordance with the State's Continuing Planning Process. In certain instances, certified State water quality management plans will not contain specific best management practices but will outline a process to be followed in developing best management practices for individual activities.

b. Biological Water Quality - Refers to the number and type of living organisms existing in a surface water body.

c. Chemical Water Quality - Refers to chemical elements and compounds which are found in ionized, complexed or dissolved states in water (i.e., calcium, sulfate, dissolved oxygen.)

d. Cold Water Fishery - A water body which is managed by the Wyoming Game and Fish Department primarily for one or more of the following species: Grayling (*Thymallus arcticus*); Northern Pike (*Esox lucius*); Salmon (*Oncorhynchus*); Sauger (*Sitizosterdion canadense*); Trout (*Salmo* and *Salvelinus*); Walleye (*Stizostedion vitreum*); and Whitefish (*Prospium williamsoni*).

e. Conventional Water Treatment - Shall be considered to be, in order of application for public water supplies, the following processes; coagulation, sedimentation, filtration and chlorination.

f. Dissolved Oxygen - A measure of the amount of free oxygen in water.

g. Effluent Limitations - Any restriction established by the State or by the Administrator of the Federal Environmental Protection Agency (EPA) on quantities, rates and concentrations of chemical, physical, biological and other constituents which are discharged from point sources into waters of the State, including schedules of compliance.

h. Eutrophic - Waters abundant in nutrients and having high rates of productivity frequently resulting in oxygen depletion below the surface layer.

i. Existing Quality - The established long-term chemical and biological water quality as of the date of promulgation of these regulations with recognition of the fact that water quality will tend to fluctuate on a seasonal and year-to-year basis depending upon natural fluctuations in water quality.

j. Fecal Coliform - Those species within the coliform bacteria group which are present in the gut or feces or warm-blooded animals. The group includes organisms which are capable of producing gas from lactose broth in a suitable culture medium within 24 hours at 44.5°C - 2°C.

k. Federal Act - The Federal Water Pollution Control Act and subsequent amendments to that Act.

l. Full Body Contact Recreation - Any recreational or other surface water use in which there is prolonged and intimate contact with the water involving considerable risk of ingesting water in quantities sufficient to pose a significant health hazard (i.e., water skiing, swimming).

m. Game Fish - Bass (*Micropterus*), Catfish (*Ictalurus punctatus*), Crappie (*Promoxis*), Grayling (*Thymallus arcticus*), Ling (*Lota lota*), Northern Pike (*Esox lucius*), Perch (*Perca flavescens*), Salmon (*Oncorhynchus*), Sauger (*Stizostedion canadense*), Sunfish (*Lepomis*), Trout (*Salmo* and *Salvelinus*), Walleye (*Stizostedion vitreum*), and Whitefish (*Prosopium williamsoni*).

n. LC50 the "Lethal concentration" at which fifty percent of the specified test organisms die within the time specified (i.e., the 96 hour LC50 means that at concentration "x" fifty percent of the test organisms died within 96 hours.)

o. Main stem - This term shall mean the major channel of a river or stream as shown on the latest and most detailed United States Geological Survey map for the area.

p. Milligrams Per Liter (mg/l) - Milligrams of solute per liter of solution - equivalent to parts per million (ppm) in liquids, assuming unit density.

q. Mixing Zone - That portion of a surface water body within which an effluent becomes thoroughly mixed with the water body.

r. Natural Water Quality - That quality of water which would exist without the measurable effects or measurable influence of man's activities.

s. Nephelometric Turbidity Unit (NTU) - The standard unit used to measure the optical property that causes light to be scattered and absorbed rather than transmitted in straight lines through water, was

measured by a nephelometer.

t. Net Oil and Grease - Shall mean the residue from an oil and grease test conducted in accordance with the liquid-liquid extraction with trichlorotrifluoroethane (freon) test method found in the latest edition of Standard Methods for the Examination of Water and Wastewater corrected for elemental sulfur. The test for elemental sulfur shall be capable of measurement at a level of 2 milligrams - 1.0 milligram.

u. Non-Point Source - Any runoff from irrigated and non-irrigated lands used for grazing and/or crop production; runoff from forest lands, construction activities; urban areas, solid and hazardous waste disposal sites and recreational activities; indirect discharges from septic tanks and leach fields; and, other sources and activities not subject to regulation under the National Pollutant Discharge Elimination System (NPDES).

v. pH - Term used to express the intensity of acid or alkaline conditions. A pH value of 7 at 25°C is neutral, with pH's of less than 7 progressively more acid and pH's greater than 7 progressively more basic (alkaline).

w. Pico-Curies Per Liter (pCi/l) - A terms describing the radiation level of water or solutions. A pico-curie is equal to 10^{-12} curie, a curie is defined as 3.7×10^{10} disintegrations per second.

x. Point Source - Any discernible, confined and discrete conveyance, including but not limited to any pipe, ditch, channel, conduit, well, discrete fissure, container, rolling stock, concentrated animal feeding operation or vessel or other floating craft, from which pollutants are or may be discharged, except those pollutant sources specifically identified as a non-point in these regulations.

y. Salinity - The total mineral dissolved constituents, after carbonates have been converted to oxides, organics have been oxidized and bromine and iodine have been converted to chloride. This term is often used interchangeably with the term total dissolved solids.

z. Secondary Body Contact Recreation - Any recreational or other surface water use in which contact with water is either incidental or accidental and in which the probability of ingesting appreciable quantities of water is minimal, such as fishing, hunting and commercial and recreational boating.

aa. Wyoming Continuing Planning Process (CPP) -- A planning process involving public participation and political debate and including policies, procedures and programs that result in the definition and implementation of actions that lead to the prevention, reduction and abatement of all forms of water pollution and for the protection and enhancement of water uses in the State of Wyoming. The CPP is continuous in time and is designed to respond to changes in conditions and attitudes. Certified and approved State and areawide water quality management plans prepared pursuant to Section 208 of the Federal Act describe elements of the CPP and are outputs of the CPP. Such plans include but are not limited to the following:

(1) Water quality monitoring requirements and programs;

(2) Definition and assessment of water quality problems;

(3) Identification of alternative solutions, their costs and effectiveness;

(4) Evaluations of their social, economic and environmental impact;

(5) Best management practices or procedures and programs for their determination which lead to the control of non-point sources of pollution;

(6) Definition of institutional roles, responsibilities and assignments for planning and implementation activities;

(7) Priorities for action;

(8) Procedures for public participation, local government involvement, conflict resolution performance, evaluation, plan update and formal amendments.

bb. State Program Plan - A report submitted on an annual basis by the State to the EPA, under the requirements of Section 106 of the Federal Act. This document outlines the State's water pollution control goals for the ensuing fiscal year.

cc. Surface Waters of the State - All permanent and intermittent defined drainages and lakes and reservoirs which are not man-made retention ponds, used for the treatment of municipal, agricultural or

industrial waste; and all other bodies of surface water, either public or private which are wholly or partially within the boundaries of the State. Nothing in this definition is intended to expand the scope of the Environmental Quality Act, as limited in Wyoming Statutes, Sec. 35-11-1104(c).

dd. Toxic Materials - Those materials or combinations of materials including disease causing agents, which, after discharge and upon exposure, ingestion, inhalation or assimilation into any environmentally significant organism, either directly from the environment or indirectly by ingestion through food chains, will, on the basis of information available to the Administrator of the EPA, cause death, disease, behavioral abnormalities, cancer, genetic malfunctions, physiological malfunctions (including malfunctions in reproduction) or physical deformations in such organisms or their offspring.

ee. Tributary - Those streams or stream segments which flow into or contribute water to another stream, stream segment or other water body.

ff. Warm Water Fishery - A water body which is managed by the Wyoming Game and Fish Department primarily for one or more of the following species: Bass (*Micropterus*); Catfish (*Ictalurus punctatus*); Crappie (*Pomoxis*); Ling (*Lota lota*); Perch (*Perca flavescens*); and Sunfish (*Lepomis*).

gg. Wyoming Surface Waters - Shall have the same meaning as "surface waters of the State" defined in Section 2.cc.

hh. Zone of Passage - A continuous water route which joins segments of a surface water body above and below a mixing zone without passing through the mixing zone.

American Samoa⁵¹

"Applicant means any person who has applied for permission to discharge wastes.

"Grantee" means any person who has received permission from Environmental Quality Commission for such discharges.

"Person" also includes any industry, business, village, district, the territory, or any department or agency thereof.

"Coastal waters" includes all oceanic and estuarine waters within a 12 mile limit of shore.

"Best practicable treatment or control" is that degree

District of⁵²
Columbia

of treatment for municipal or industrial wastes found necessary to meet the requirements of the Federal Water Pollution Control Act, as amended, and to provide the water quality required to protect the classified uses of the receiving water.

"Receiving water" is that stream, aquifer, or body of water receiving a discharge in any physical form.

"Standards of water quality" and "Water Quality Standards" are herein defined to be synonymous with the meaning of "Water quality criteria" as defined in the Federal Water Pollution Control Act, as amended.

"Primary contact waters for recreational purposes" are those waters where such activities as swimming, wading, water skiing, surfing, and other activities occur and in which there is prolonged and intimate contact with the water involving considerable risk of ingesting water in quantities sufficient to pose a significant health hazard.

Bacteria - A group of test organisms which are used as indicators of the sanitary quality of the water. Fecal coliform bacteria is the specific test organism selected by the District of Columbia for this purpose. Bacterial concentrations originate primarily from municipal waste treatment plants, sanitary and combined sewers, storm drains, vessels, and agricultural wastes.

Criteria - Measurements or descriptions of instream water quality used as guidelines in setting discharge permit effluent limitations.

Degradation - A measurable deterioration in receiving stream (beyond a prescribed mixing zone) of one or more of the five (5) constituents or water quality for which standards are designated herein.

Dissolved Oxygen (D.O.) - The oxygen dissolved as a gas in sewage, water, or other liquid usually expressed in milligrams per liter (g/l), parts per million (ppm), or percent saturation. Adequate dissolved oxygen levels are necessary in waters to protect fish and other aquatic life and to prevent offensive odors. Low dissolved oxygen concentrations are generally due to excessive organic solids discharged as a result of inadequately treated waste (having high BOD); excessive algae growths may cause vastly fluctuating dissolved oxygen levels, and other factors such as temperature and water movement have an impact on dissolved oxygen levels.

Interstate Waters - To the extent they are within the geographic boundaries of the District of Columbia the following waters are interstate waters: Potomac River, Anacostia River, Rock Creek, and Oxon Run.

pH - The index of hydrogen ion activity, used as an indication of acidity or alkalinity in waters. The pH of most waters ranges from 6.5 to 8.5, and most uses of water, such as aquatic life propagation, prosper at these levels. In most cases, a pH outside this range is due to discharge of industrial wastes or decaying organic vegetation.

Pollution - The addition of sewage, industrial wastes or other harmful or objectionable material to water at a concentration or in sufficient quantity to result in measurable degradation of water quality.

Suspended solids - Solids that either float on the surface of, or are in suspension in water, wastewater, or other liquids, and which are largely removable by laboratory filtering. Also referred to as nonfilterable residue.

Sewage - (1) The water supply of a community after it has been used and discharged into a sewer, (2) wastewater from the sanitary conveniences of dwellings, business buildings, factories and other institutions.

Temperature - A measure of the heat content of water. While stream temperature is affected naturally, man significantly affects it through the construction and operation of dams and the discharge of cooling waters from industrial processes, particularly power generation.

Toxic Materials - Materials which are harmful to human, plant, animal or aquatic life. These may include hundreds of compounds present in various waters such as industrial waste discharges or runoff from where pesticides have been applied.

Guam⁵³

"Adversely affect" shall mean damage to the waters of the Territory that results in any of the following:

1. substantial increase in abundance or distribution of any species not representative of the highest community development achievable in receiving waters of comparable quality;

2. a substantial decrease of formerly indigenous species;

3. change(s) in community structure to resemble a simpler successional stage than is natural for the locality and season in question;

4. unanesthetic appearance, odor or taste of the waters;

5. elimination of an established or potential economic or recreational use of the waters;

6. reduction of the successful completion of life cycles of indigenous species, including those of migratory species; and

7. substantial reduction of community heterogeneity or trophic structure.

"Aquifer" shall mean a water-bearing stratum of permeable rock, sand, or gravel.

"Best pollutant removal or control" shall mean a feasible process which, as demonstrated by general use, demonstration process or pilot plants represents good engineering practice at reasonable cost at the time a discharge permit is issued by the Agency.

"Coastal water" includes "near-shore waters" "off-shore waters," and "estuaries."

"Conservation" means planned management of a natural resource to prevent destruction or neglect.

"Direct rapid movement" shall mean the movement of effluent through the soil and underlying rock strata in such a manner that pollutants which would adversely impact on the designated uses of the receiving water are not removed.

"Discharger" shall mean any person who emits any wastewater, substance, or material into the waters of the Territory, whether or not such substance causes pollution.

"Effluent" shall mean any point source wastewater discharged directly or indirectly to waters of the Territory or to any storm sewer, and the runoff from land used for the disposition of solid wastes, wastewater, or sludges.

"Effluent limitation" shall mean any restriction or prohibition established under Territorial or Federal Law including, but not limited to, parameters for toxic and non-toxic discharges, standards of performance for new sources, or ocean discharge

criteria. The restrictions or prohibitions shall specify quantities, rates, and concentrations of chemical, physical, biological, and other constituents which are discharged to the waters of the Territory.

"Equivalent to (secondary treatment)" shall mean that process or group of processes achieving a maximum practicable removal of solids, oils, grease, acids, alkalis, toxic materials, bacteria, taste and odor-causing materials, color and any other objectionable constituents contained in untreated wastes to produce an effluent equal to that obtained from secondary treatment facilities in current use for any specific category of industrial waste.

"Estuary" shall mean that region of interaction between near-shore waters and rivers within which tidal action and river flow bring about mixing of fresh and salt water.

"Higher degree of treatment" shall mean any physical, biological and/or chemical method directed at removing a specified portion of the remaining pollutants before and/or after secondary treatment.

"Hydrologic cycle" shall mean that natural system dealing with the properties, distribution, and circulation of water on the surface of the land, in the soil and underlying rocks, and in the atmosphere.

"Lethal Concentration - 50 percent (LC50)" shall mean that concentration of a toxic substance in water in which 50 percent of a species of aquatic organism survives for a given time period.

"Line of Mean High Water" shall mean the shoreline as indicated on the 1:24,000 Series (Topographic) Maps of the Island of Guam prepared by the U.S. Geological Survey.

"Marine sanitation device" shall mean any equipment for installation on any vessel or water craft which is designed to receive, retain, treat, or discharge sewage or other pollutants or any process to treat such sewage, or other pollutants.

"Mixing zone" shall mean the area or volume of a water body within which effluent(s) shall become physically mixed with the receiving waters through initial dilution. Initial dilution is the process through which the wastewater immediately mixes with the receiving water due to the momentum of the waste discharge and the difference in density between the discharge and the receiving water. The total area or

volume of water designated as a mixing zone shall be limited to that area or volume which will not interfere with biological communities or populations of important species to a degree which is damaging to the ecosystem and which will not cause substantial damage to or impairment of designated water uses within the mixing zone or in surrounding waters. A mixing zone shall be considered designated only when approved by the Guam Environmental Protection Agency and when concurrence of the U.S. EPA has been received.

"Natural conditions" shall mean conditions free of substances or conditions or the combination of both attributable to domestic, commercial and industrial discharges, or agricultural, construction or other land-use practices.

"Near-shore waters" shall mean all coastal waters lying within a defined reef area; all coastal waters of a depth of less than ten fathoms (60 feet) and all coastal waters greater than 10 fathoms up to 1000 feet off-shore where there is no defined reef area.

"New source" shall mean any wastewater sources, the construction of which is commenced on or after the effective date of these standards.

"Off-shore waters" shall mean all coastal waters beyond the limits defined for "near-shore waters" to the Territorial Limit as recognized by International Law.

"Permit" shall mean a permit issued pursuant to Section 57045 of the Water Pollution Control Act.

"Pollution" shall mean the alteration of the physical, chemical, or biological properties of any waters of the Territory which renders said waters harmful or detrimental for their most beneficial uses adversely and unreasonably impair the water quality of the Territory, or which renders said waters hazardous to human health or harmful or detrimental for their most beneficial uses.

"Point source" shall mean any discernible, confined and discrete conveyance including, but not limited to, any pipe, ditch, channel, tunnel, conduit, well, discrete fissure, container, rolling stock, concentrated animal feeding operation, or vessel or other floating craft, from which pollutants are or may be discharged.

"Potable water resources" shall mean waters of the Territory actually used or intended for use for the

purpose of furnishing water for drinking or general domestic use.

"Receiving water(s)" shall mean water(s) of the Territory into which wastes or wastewaters are, or may be, discharged.

"Schedule of compliance" shall mean a schedule of remedial measures and times including an enforceable sequence of actions or operations leading to compliance with any control regulation or effluent limitation.

"Secondary treatment" shall mean the following degree of pollutant removal:

1. Biochemical oxygen demand (five-day).

a. The arithmetic mean of the values for effluent samples collected in a period of 30 consecutive days shall not exceed 30 mg/l.

b. The arithmetic mean of the values for effluent samples collected in a period of seven consecutive days shall not exceed 45 mg/l.

c. arithmetic mean of the values for effluent samples collected in a period of 30 consecutive days shall not exceed 15 percent of the arithmetic mean of the values of effluent samples collected at approximately the same times during the same period (85 percent removal).

2. Suspended solids

a. The arithmetic mean of the values for effluent samples collected in a period of 30 consecutive days shall not exceed 30 mg/l.

b. The arithmetic mean of the values for effluent samples collected in a period of seven consecutive days shall not exceed 45 mg/l.

c. The arithmetic mean of the values for effluent samples collected in a period of 30 consecutive days shall not exceed 15 percent of the arithmetic mean of the values for influent samples collected at approximately the same times during the same period (85 percent removal).

3. Fecal coliform bacteria.

a. The arithmetic mean of the value for effluent samples collected in a period of 30 consecutive days shall not exceed 200 per 100 ml.

b. The arithmetic mean of the values for effluents samples collected in a period of seven consecutive days shall not exceed 400 per 100 ml.

4. pH. The effluent values for pH shall remain within the limits of 6.0 to 9.0.

"Toxic shall mean lethal, teratogenic or mutagenic, or otherwise damaging to man or other living organisms.

"Wastewater" shall mean sewage, industrial waste, or other waste, or any combination of these, whether treated or untreated, plus any admixed land runoff.

"Zone of passage" shall mean a continuous water route which joins segments of a river, stream, reservoir, estuary, or channel above, below, or around, a mixing zone. As a minimum no less than one-third of the cross section of the water body shall be retained in compliance with the water quality criteria.

Puerto Rico⁵⁵

PUERTO RICO DEFINITIONS

Acute Bioassay - Toxicity test designed to determine if the response to a stimulus, such as a total effluent, specific substance or combinations of these, has sufficient severity to induce a detectable effect in an organism during a period of 96 hours or less; even if said effect is not necessarily the death of the organism. The acute bioassays shall be performed according to the procedures described in "Mixing Zone and Bioassay Guidelines" approved by the Board.

Acute Effect - Organism response to a stimulus, detected during an acute bioassay that comprises a stimulus of such severity that induces a quick response. In toxicity tests, an acute response is considered to occur in a period of 96 hours or less. An acute effect can take place through events that not necessarily involve the death of the organism.

Acute Toxicity Units - The reciprocal of the effluent dilution that causes an acute effect by the end of an acute exposure period, obtained during an acute bioassay as defined by the following equation:

$$TU_a = \frac{100}{LC_{50}}$$

(The LC_{50} is expressed as the percent (%) of effluent in the dilution water).

Agent - All the factors, including light and heat, which cause or could cause, induce or could induce, produce or could produce, influence or could influence, help or could help to cause variations or alterations in organisms or in the environment.

Background Concentration - Existing biological, chemical, or physical characteristics in a body of water. For mixing zones, a point one hundred (100) meters upstream from the limit of the mixing zone will be used for monitoring, or at the location approved by the Board by mutual agreement with the petitioner, based on the details of each individual case. The value of the background concentration will be determined according to the procedures established by the "Mixing Zone and Bioassay Guidelines" approved by the Board.

Benthic Species - Organisms that inhabit on, over, or in the bottom of the water body; live adhered to the bottom or crawl over the bottom.

Best Engineering Practices - Use of the most effective procedures, methods, techniques, and/or equipment to efficiently attain the desired objective at a minimum economic, human and environmental cost.

Bioaccumulative Agent - Agent which is assimilated by organisms, but is not metabolized and shows an elimination rate much lower than its accumulation rate, so that its total content tends to increase during the life of the affected organisms.

Bioassay - Toxicity test to determine the acute or chronic response of living organisms to an effluent, specific substances or combination of these, performed according to procedures described in the "Mixing Zone and Bioassay Guidelines", approved by the Board. The representative organisms to be used must be approved by the Board prior to the test.

Carcinogenic Agent - Agent that produces metabolic alterations in cells, prompting their uncontrolled growth.

Chronic Bioassay - Toxicity test designed to determine if the response to a stimulus such as, a total effluent, a specific substance, or combination of these has sufficient severity to induce a long-term effect that could linger for up to one-tenth of the life span of the organism. A chronic effect could be lethality, growth rate reduction, reproduction rate reduction, etc. A chronic bioassay shall be performed

according to procedures described in "Mixing Zone and Bioassay Guidelines", approved by the Board.

Chronic Effect - Organism response to a stimulus, detected during a chronic bioassay, that comprises a stimulus that lingers or continues for a relatively long period of time, which could be of the order of one-tenth of the life span of the organism used in the test. A chronic effect could imply lethality, growth rate reduction, reduced reproduction rate, etc.

Chronic Toxic Unit - The reciprocal of the effluent dilution that causes no unacceptable effect on the test organisms by the end of the chronic exposure period, obtained during a chronic bioassay, as defined by the following equation:

$$TU_c = \frac{100}{NOEC}$$

(The NOEC value should be expressed in terms of the percent (%) of the effluent in the dilution water).

Closed Body of Water - All surface water bodies, groundwater and coastal waters that are not open coastal waters.

Criteria Continuous Concentration (CCC) - EPA national water quality criteria recommendation for the highest instream concentration of a toxicant or an effluent to which organisms can be exposed indefinitely without causing an unacceptable effect. It is equal to:

$$CCC = 1.0 TU_c$$

Criteria Maximum Concentration (CMC) - EPA national water quality criteria recommendation for the highest instream concentration of a toxicant or an effluent to which organisms can be exposed for a brief period of time without causing mortality. It is equal to:

$$CMC = 0.3 TU_a$$

Critical Initial Dilution - Minimum dilution to be determined by means of the use of a mathematical model to be approved by the Board, and according to the procedures described in "Mixing Zone and Bioassay Guidelines", approved by the Board.

Diffuser - Structure which is connected to or is part of a submerged outfall provided with ports and whose function is to reduce the diameter of the outfall in order to increase the effluent exit velocity to obtain a better dilution in the receiving body of water.

Dilution - Dilution is the reduction of the concentration of a substance by mixing it with ambient waters, and will be defined by the following equations:

a. Volumetric Dilution

$$D = V_e + V_d/V_e$$

where;

D = Dilution

V_e = Effluent volume

V_d = Dilution volume

b. Flow Dilution

$$D = Q_e + Q_d/Q_e$$

where;

D = Dilution

Q_e = Effluent flow

Q_d = Dilution waters flow

c. Concentration Dilution

$$D = C_e - C_a/C - C_a$$

where;

D = Dilution

C_a = Background concentration

C_e = Concentration of the pollutant in the discharge

C = Final concentration of the pollutant after dilution.

Dilution shall be determined according to the procedures described in "Mixing Zone and Bioassay Guidelines" approved by the Board.

Discharge Length Scale - The square-root of the cross-sectional area of any port in an outfall.

Drinking Water Source - Extraction of water for human or livestock consumption.

Dye Tests - Tests which are performed by injecting dyes into any point of a discharge or a body of water to determine the origin, the direction of the flow and the intermediate or final fate.

EPA - U.S. Environmental Protection Agency

LC₅₀ - The pollutant concentration in a bioassay killing 50% of exposed organisms during a specific period of observation, expressed in terms of the effluent percent in the dilution water.

Local Water Depth - The depth at the point where the diffuser of an outfall is located under low tide conditions, for ocean outfalls; or low flow conditions, for surface water discharges.

Mixing Zone and Bioassay Guidelines - Technical guidelines developed by the Board which describe procedures, methods, models, techniques and organisms to be used to calculate the initial dilution; perform chronic and acute bioassays; to collect field data, or to establish the natural background concentration value, as required to verify compliance with inherent mixing zone conditions. These Guidelines are based on the following EPA publications: "Technical Support Document for Water Quality Based Toxics Control" and "Users Guide to the Conduct and Interpretation of Complex Effluent Toxicity Tests at Estuarine/Marine Sites". The guidelines will be revised, in accordance with updated versions of these documents or other documents released by EPA which directly impact the guidelines in effect at the time of publication of the final document.

Mixing Zone - Tridimensional space in a receiving body of water where the discharge is diluted with surrounding waters, which has been defined according to Article 5 of this Regulation. Applicable water quality standards, the CCC and the CMC are met at the boundary of the mixing zone.

Mutagenic Agent - Agent that induces genetic variations due to drastic changes in the organization of the genes in a chromosome.

Natural Background Concentration - The biological, physical and chemical characteristics existing in a

water body that is not affected by point or nonpoint discharges, as determined by field studies whose content and extension shall be defined according to "Mixing Zone and Bioassay Guidelines", and according to the agreements between the Board and the petitioner, based upon the details of each case when problems arise in the implementation of said Guidelines.

NOEC (No. Observed Effect Concentration) - The highest measured continuous concentration of an effluent or a pollutant that causes no detectable effect on an organism used in bioassays.

Objectionable Odor - Odor considered offensive by the consensus of at least five (5) persons, elected by the Board, when exposed to it. The odor emitted by trees, shrubs, plants, flowers, grass, domestic gardening, and agricultural processes and the use of fertilizers (except for the use of sugarcane wastes), will not be considered objectionable.

Open Coastal Waters - All the coastal waters, except bays and estuaries, with formations that significantly mitigate the direct impact of the waves on the shore.

Outfall - Pipe or conduit which conveys an effluent to a receiving body of water.

Pelagic Species - Organisms that have the ability of self locomotion and can overcome the currents. These organisms can be found anywhere in the water column, near the surface, the bottom or at any point between the surface and the bottom.

Persistent Agent - An agent which degrades or decomposes slowly, biologically or chemically, in the natural environment.

Planktonic Species - Marine organisms that mainly inhabit the surface of the receiving body of water. Their main characteristic is that they can not overcome the currents even if they have self locomotion.

Point of Discharge - Point where the effluent is discharged, treated or untreated, before mixing with the receiving water.

Port - Orifice of the diffuser.

Receiving Body of Water - Surface waters, coastal waters or groundwater where the discharge of pollutants occurs.

Sampling Point - Point determined by the Board or by EPA where samples are taken to evaluate compliance with federal NPDES permits issued by EPA or permits issued by the Board.

Significant Public Health Risk - Contingency of a direct or indirect injury to human well being. The hazard of the occurrence of an acute or chronic effect on the health including (but not limited to) diseases, epidemics, mutations or deformations in humans.

Submerged Outfall - Pipe or conduit which conveys an effluent to the discharge point in a receiving body of water. The pipe or conduit is located along the bottom of the waterbody.

Synergistic Effect - Occurs when two (2) or more substances, which in the original state could be harmless, react to each other and cause a toxicity which is greater than the sum of the individual toxicity of each substance.

Teratogenic Agent - Agent which induces anomalies in the fetal development.

Toxic Substances - Those substances or combinations thereof, including disease causing agents, which after being discharged and after their exposure, ingestion, inhalation or assimilation by any organism, directly from the environment or indirectly by means of ingestion through the food chain; can be the cause, based on the available information to the Board or to EPA, of death, illness, abnormal behavior, cancer, genetic mutation, physiologic malfunctioning (including malfunction in reproduction), or physical deformations, in said organisms on their descendants.

TUa - See acute toxic unit definition.

TUc - See chronic toxic unit definition.

Trust Territories⁵⁶

(a) "Near-shore waters" means:

(1) All coastal waters lying within a defined reef area;

(2) All coastal waters of a depth of less than ten fathoms (60 feet);

(3) All coastal waters greater than 10 fathoms up to 1,000 feet offshore where there is no defined reef area.

(b) "Off-shore waters" means all coastal waters beyond the limits defined for "near-shore waters."

(c) "Coastal waters" includes "near-shore waters", "off-shore waters", and those brackish, fresh and salt waters that are subject to the ebb and flow of the tide.

(d) "Best practicable treatment or control" is defined herein as not less than:

(1) Treatment in accordance with national guidelines for discharge into off-shore waters -- provided evaluation of water current patterns demonstrates the effluent will not be brought back to the beach or near-shore waters;

(2) Secondary treatment for discharge into "near-shore waters" provided that such discharge will not be made in areas which are primary contact waters for recreational purposes or will not be made into areas of unique value into which it has been determined no waste water effluent is acceptable;

(3) Disinfection comminuter -- acceptable only on emergency basis (period 3-6 months) with special approval of the Director of Health Services or the Chairman of the Environmental Protection Board.

(e) "Receiving water" is that stream, aquifer, or body of water receiving a discharge in any physical form.

(f) "Standards of water quality" is herein defined to be synonymous with the meaning of "water quality criteria" as defined in the Federal Water Pollution Control Act, as amended.

(g) "Primary contact waters for recreational purposes" are those waters where such activities as swimming, wading, water skiing, surfing, and other activities occur and in which there is prolonged and intimate contact with the water involving considerable risk of ingesting water in quantities sufficient to pose a significant health hazard.

Virgin Islands⁵⁷

Not Specified

